OLIVETTI STANDARD TYPEWRITER SERVICE MANUAL

(FOR ALL OLIVETTI STANDARD MANUAL TYPEWRITERS)

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LINEA 88 AND OTHERS

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LINEA 88

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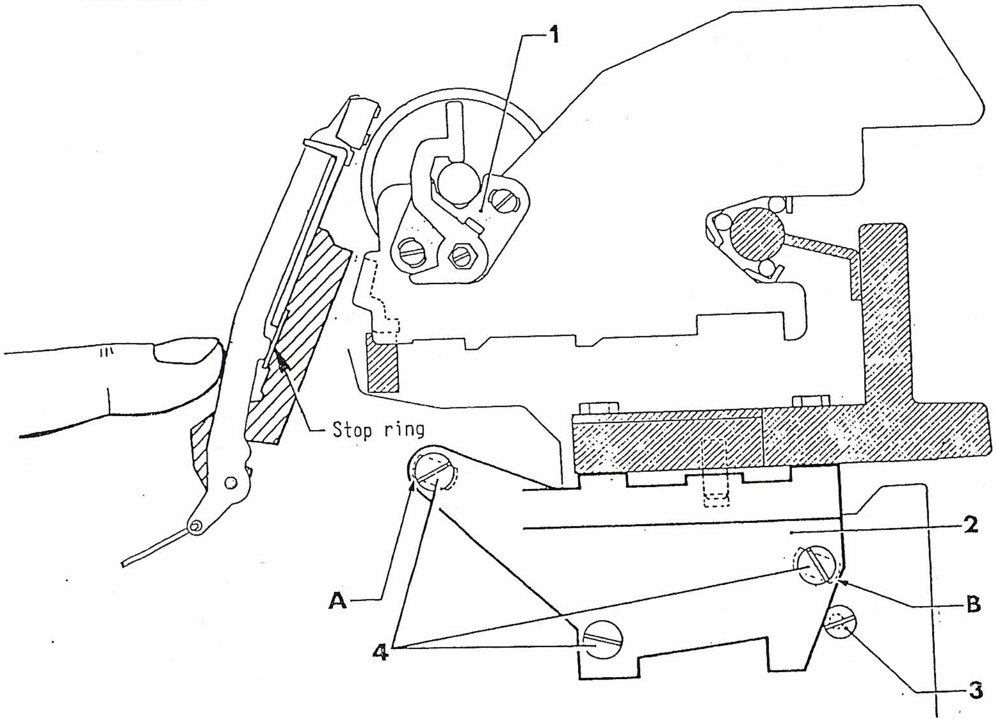
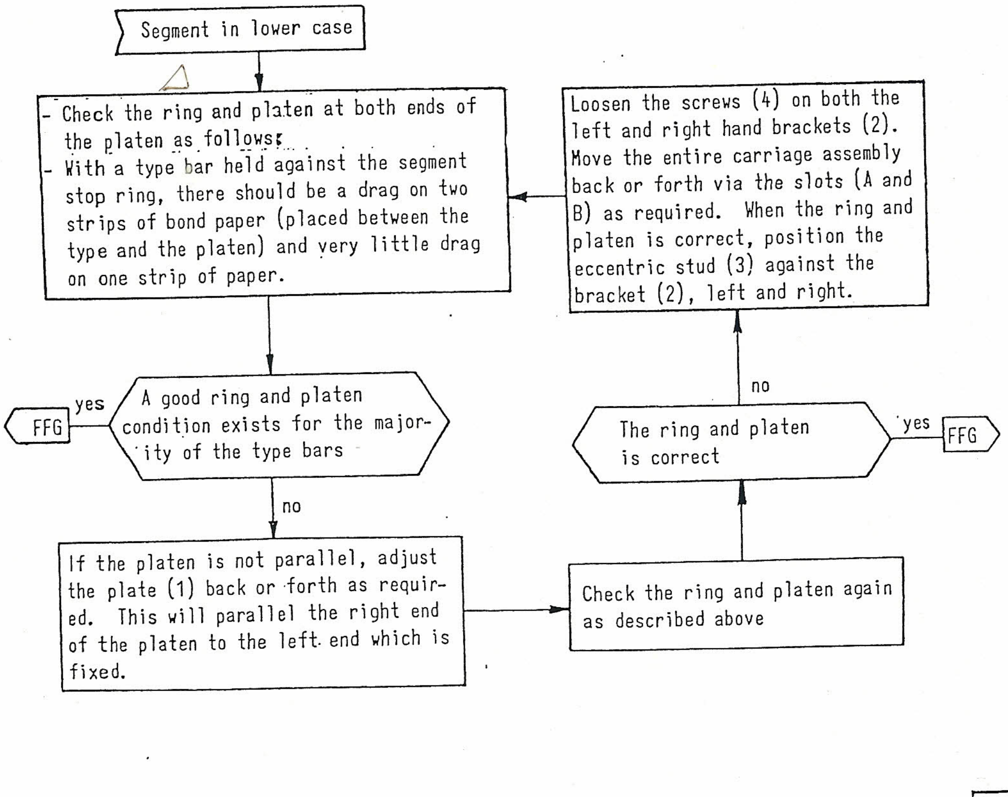
RING AND PLATEN ADJUSTMENT





Segment in lower case

- Check the ring and platen at both ends of the platen as follows:
- With a type bar held against the segment stop ring, there should be a drag on two strips of bond paper (placed between the type and the platen) and very little drag on one strip of paper.

A good ring and platen condition exists for the majority of the type bars

yes → FFG

no

If the platen is not parallel, adjust the plate (1) back or forth as required. This will parallel the right end of the platen to the left end which is fixed.

Check the ring and platen again as described above

The ring and platen is correct

yes → FFG

no

Loosen the screws (4) on both the left and right hand brackets (2). Move the entire carriage assembly back or forth via the slots (A and B) as required. When the ring and platen is correct, position the eccentric stud (3) against the bracket (2), left and right.

Y110b

(Continued from the previous page)

Check that the line lock comb (P) 062013K is free by pushing it to the right. Release it, and it must return with a snappy action so its extension (C) limits against the side wall as shown in fig.4

The comb (P) returns freely to rest

yes

Clean and lubricate the moving parts of the comb (fig.4)

With the extension (C) at rest against the side wall, check that all the key levers clear the prongs of the comb with a small clearance (L), fig.4

The clearance exists at all key levers

yes

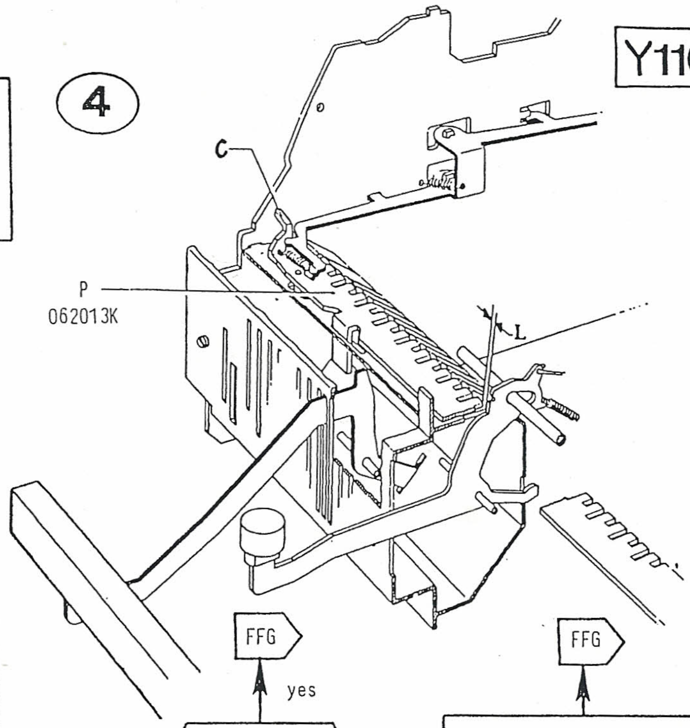
FFG

no

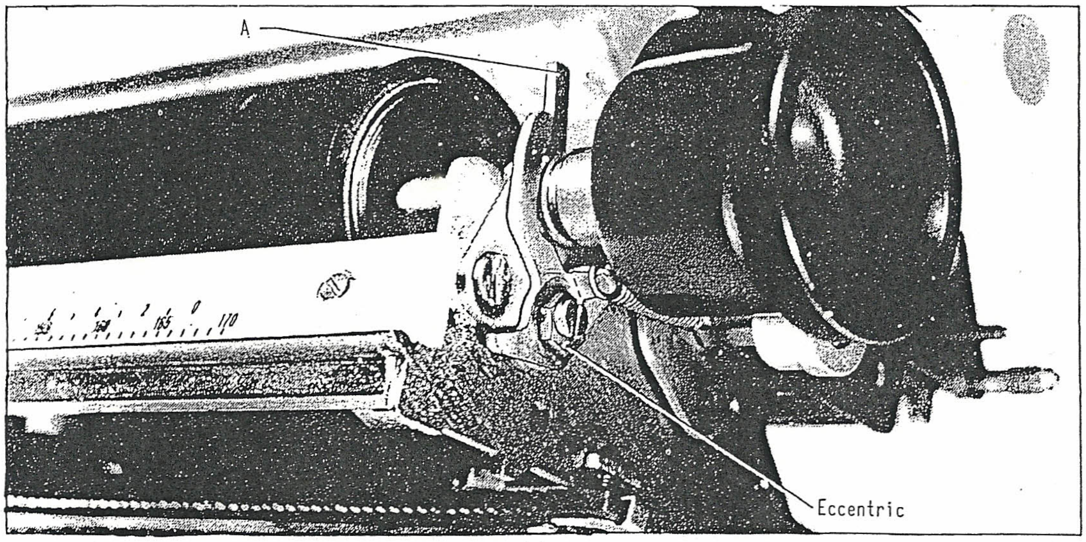
Form the extension (C) to obtain the clearance (L)

FFG

4



PLATEN LOCK LEVER ADJUSTMENT



- Release the feed roll release lever
- Check that the platen lock lever (A) securely holds the platen without vertical play

The platen has vertical play

no

FFG

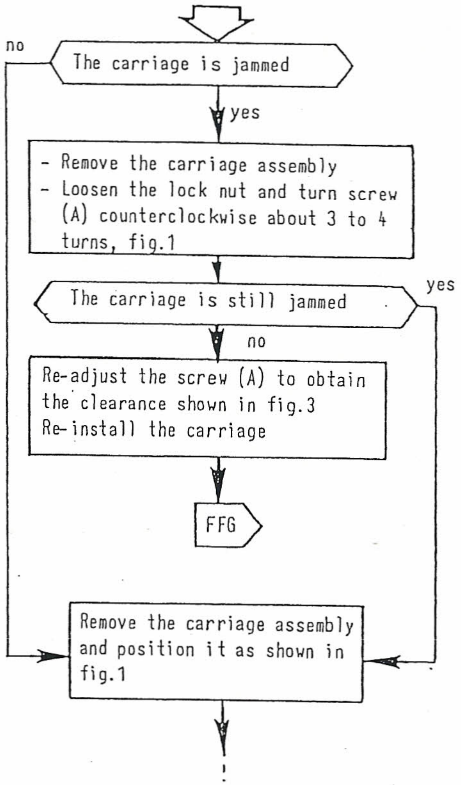
yes

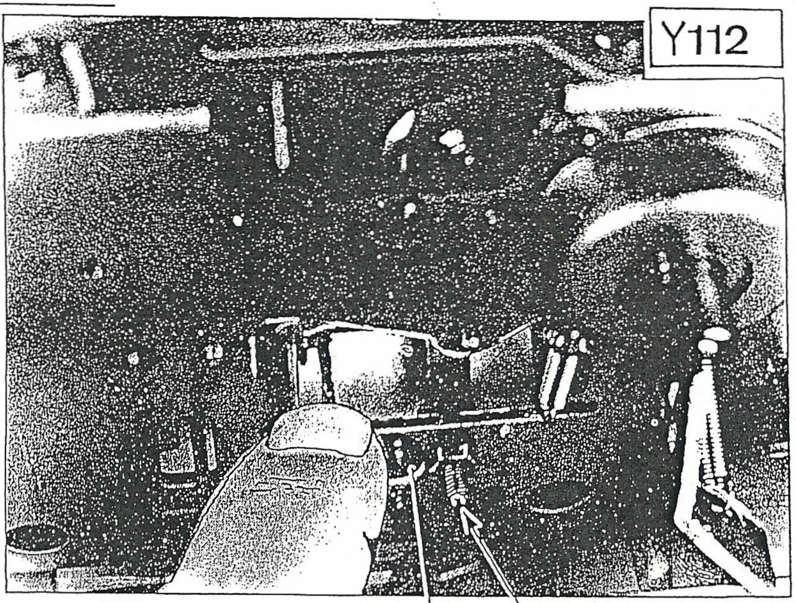
- Adjust the eccentric until all the play is eliminated
- Re-engage the feed rolls

FFG

Y111

ESCAPEMENT FIXED DOG LIMIT SCREW ADJUSTMENT


no
The carriage is jammed
yes
- Remove the carriage assembly
- Loosen the lock nut and turn screw (A) counterclockwise about 3 to 4 turns, fig.1
The carriage is still jammed
yes
no
Re-adjust the screw (A) to obtain the clearance shown in fig.3
Re-install the carriage
FFG
Remove the carriage assembly and position it as shown in fig.1



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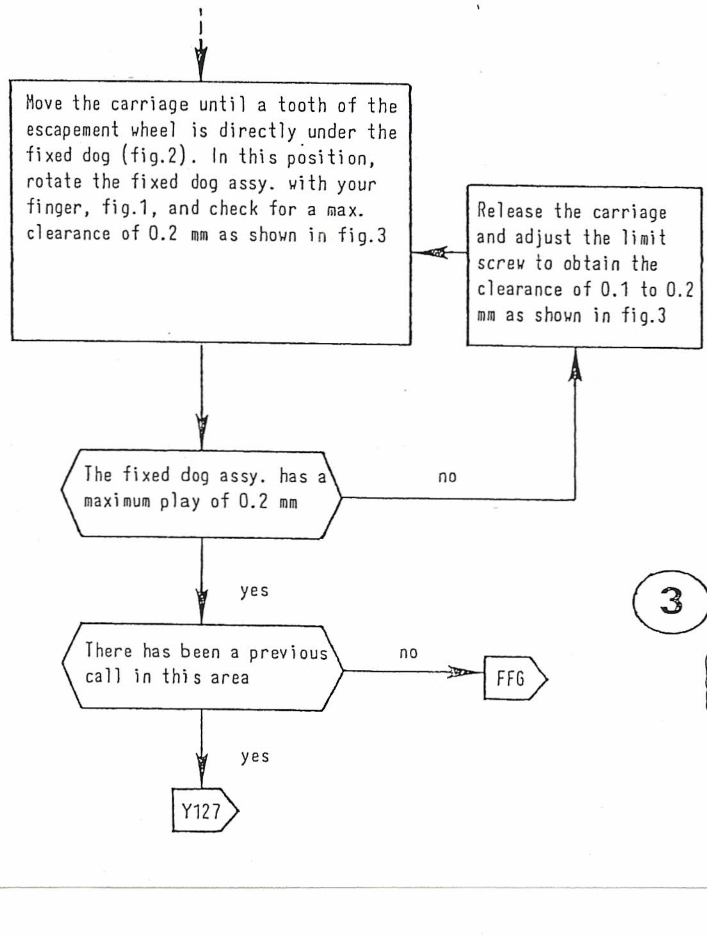
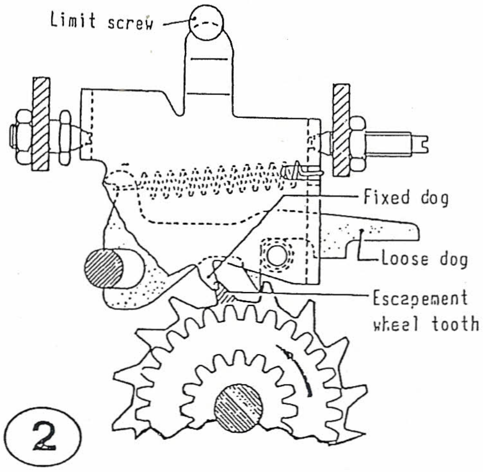

Move the carriage until a tooth of the escapement wheel is directly under the fixed dog (fig.2). In this position, rotate the fixed dog assy. with your finger, fig.1, and check for a max. clearance of 0.2 mm as shown in fig.3
Release the carriage and adjust the limit screw to obtain the clearance of 0.1 to 0.2 mm as shown in fig.3
The fixed dog assy. has a maximum play of 0.2 mm
no
yes
There has been a previous call in this area
no
FFG
yes
Y127



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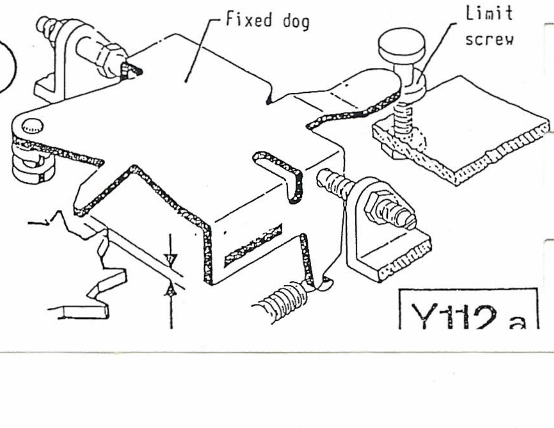


TYPE ON FEET & MOTION ADJUSTMENTS

Y113

- Segment in upper case
- Ribbon selector in black
- Insert a piece of paper in the machine

Type all upper case characters and check that the type is on feet (uniform density top to bottom)

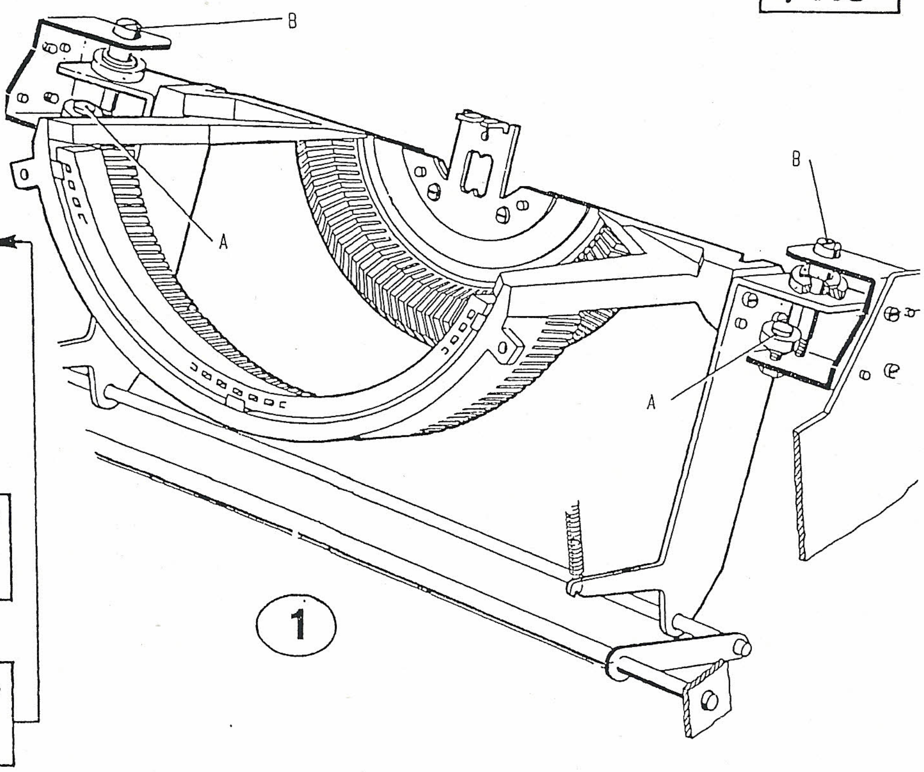
The majority of type prints on feet

yes

no

If the majority of the type prints "light on top", lower both screws (A) equally and vice versa, fig.1

Using a strip of paper as a gauge, check for an even hold at both screws (A), figure 3



①

Check the motion HhHh NnNn

The motion is correct (the characters align on the same base line)

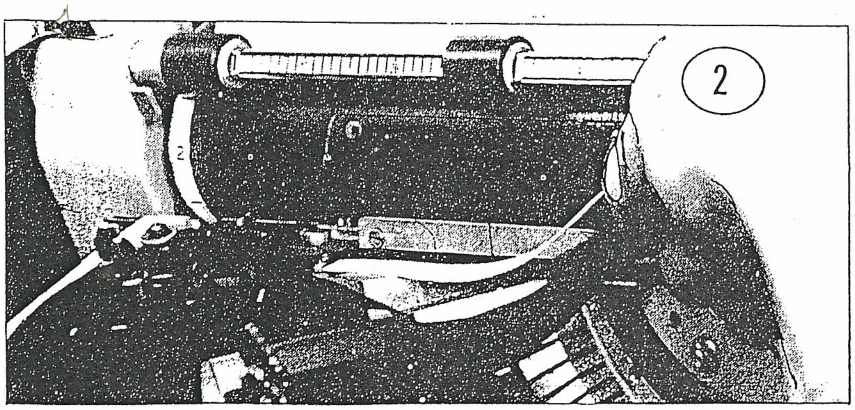
yes

FFG

no

If the motion is short, raise the upper screws (B) equally and vice versa, fig.1

Using a strip of paper as a gauge, check for an even hold at both screws (B), fig.2



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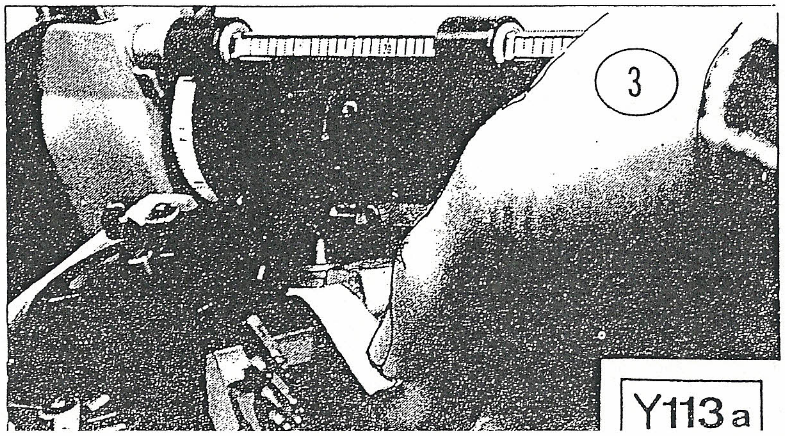

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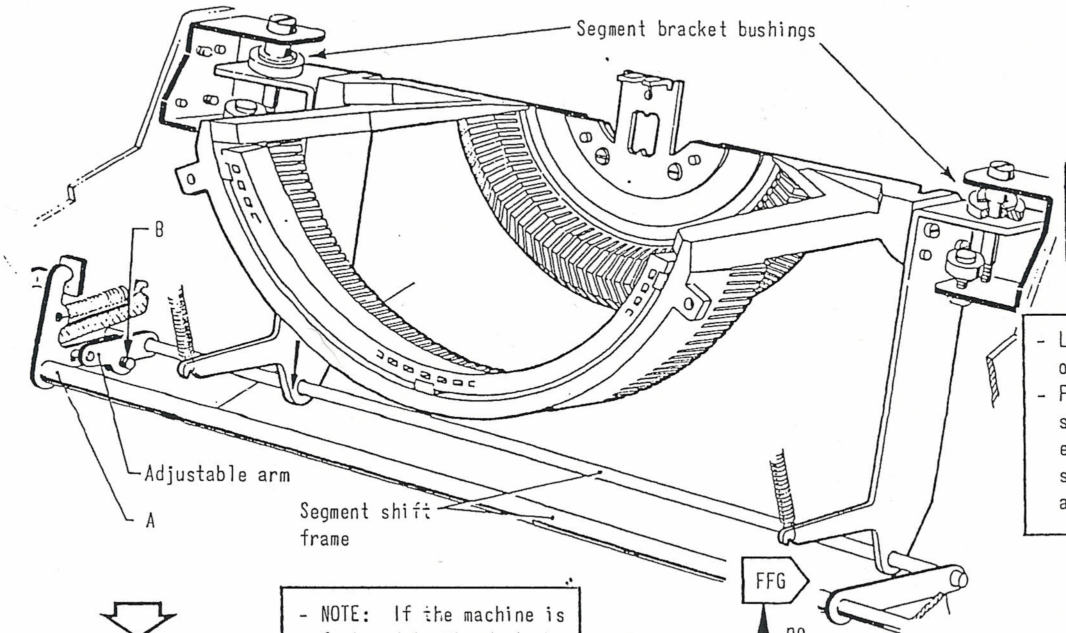
Y113a

SEGMENT FREE TRAVEL ADJUSTMENT



Remove top cover

- NOTE: If the machine is fastened to the desk, be sure the fastening screws are tightened equally
- Clean and lubricate the segment bracket bushings

The segment is still binding

no → FFG

yes → Segment in lower case

- Loosen the set screw (B) of the adjustable arm
- Free the movement of the segment by shifting the end (A) of the segment shift frame back or forth as required

Tighten the adjustable arm set screw (B)

Y113

SHIFT LOCK KEY ADJUSTMENT

Hold the shift key fully depressed

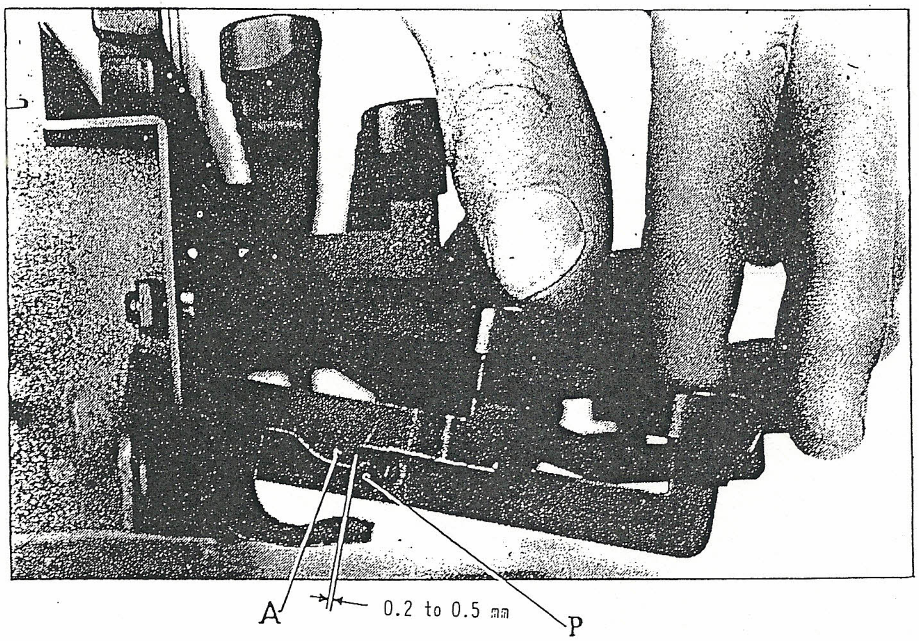
At the same time, depress the shift lock key and check that the step (A) passes behind pin (P) with a 0.2 to 0.5 mm clearance. Release the keys

Repeat the test on the other shift lock key

The passing clearances are correct

no → Adjust the pin (P) left or right as required

yes



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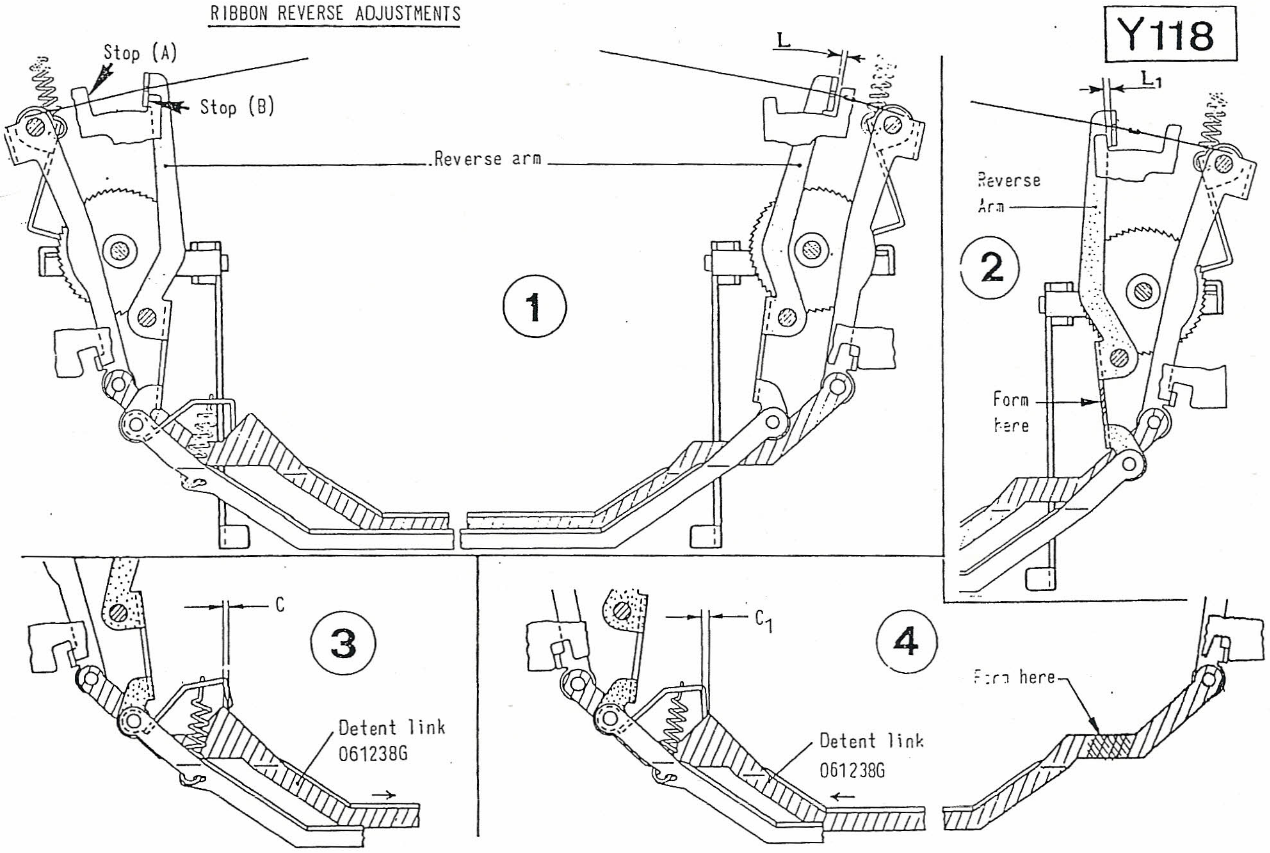
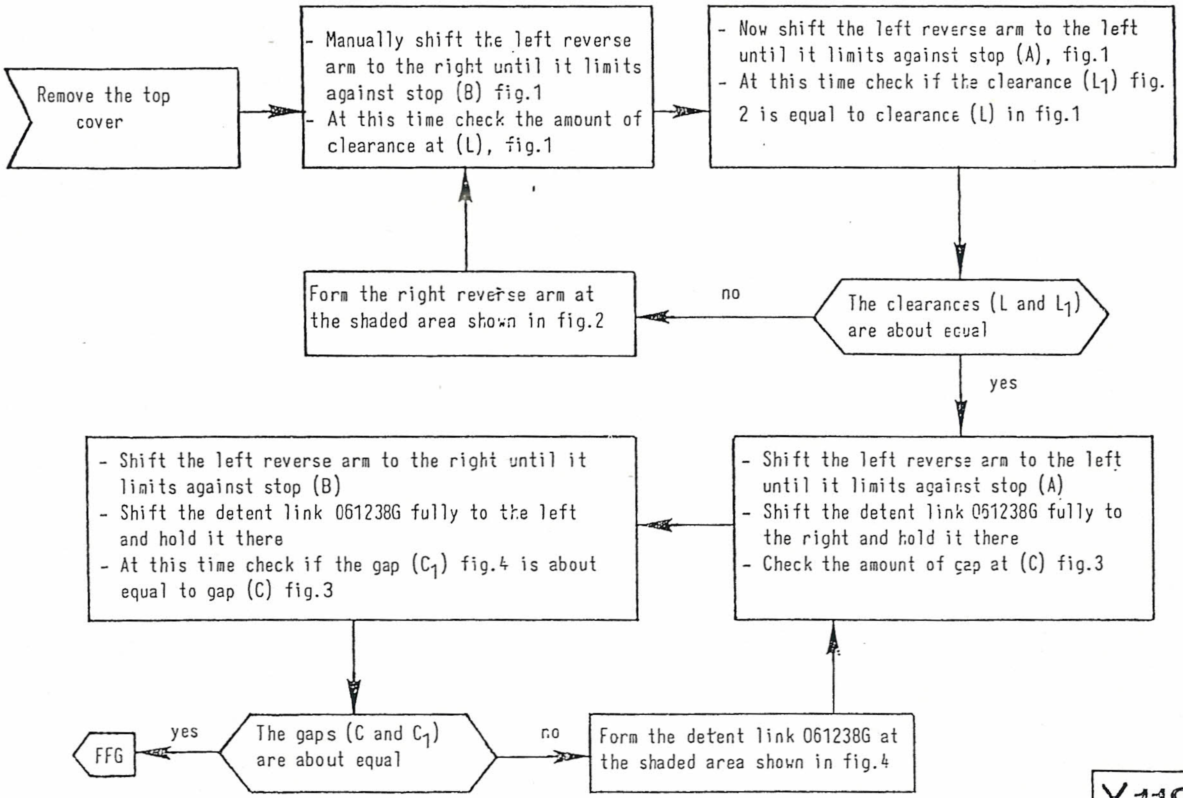
RIBBON REVERSE ADJUSTMENTS





Remove the top cover

- Manually shift the left reverse arm to the right until it limits against stop (B) fig.1
- At this time check the amount of clearance at (L), fig.1

- Now shift the left reverse arm to the left until it limits against stop (A), fig.1
- At this time check if the clearance (L_1) fig. 2 is equal to clearance (L) in fig.1

The clearances (L and L_1) are about equal

no

Form the right reverse arm at the shaded area shown in fig.2

yes

- Shift the left reverse arm to the left until it limits against stop (A)
- Shift the detent link 061238G fully to the right and hold it there
- Check the amount of gap at (C) fig.3

- Shift the left reverse arm to the right until it limits against stop (B)
- Shift the detent link 061238G fully to the left and hold it there
- At this time check if the gap (C_1) fig.4 is about equal to gap (C) fig.3

The gaps (C and C_1) are about equal

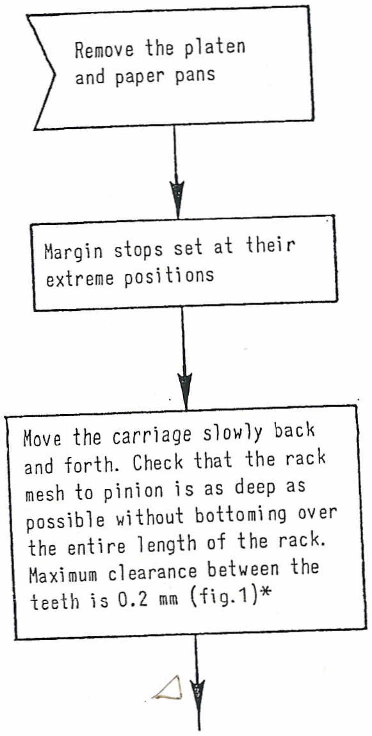
yes

FFG

no

Form the detent link 061238G at the shaded area shown in fig.4

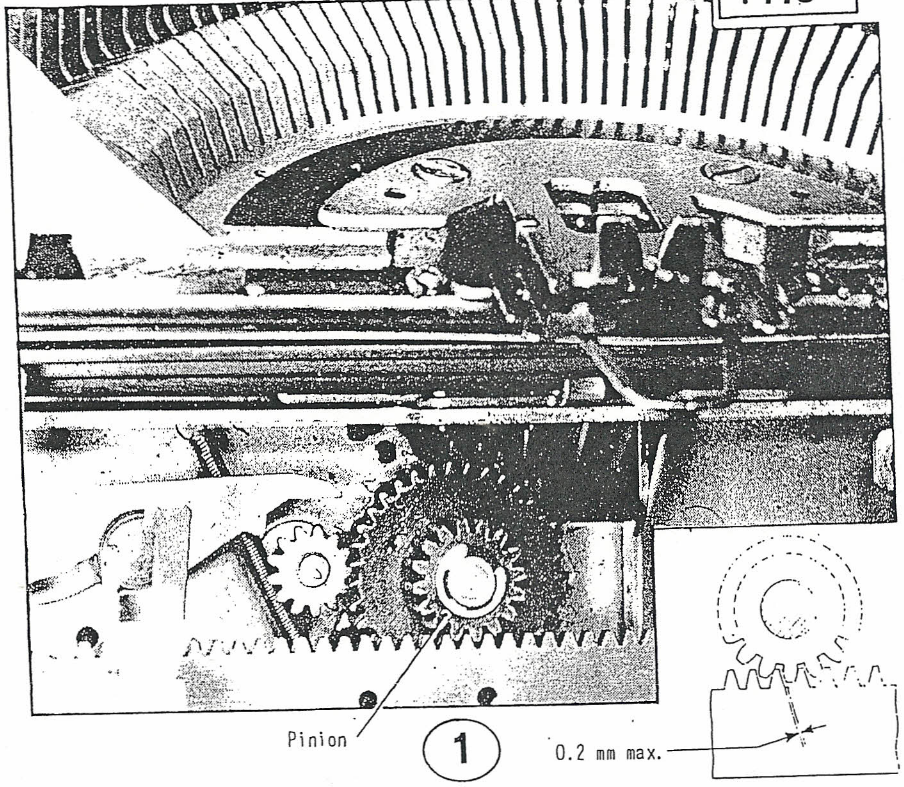
ESCAPEMENT RACK ADJUSTMENT



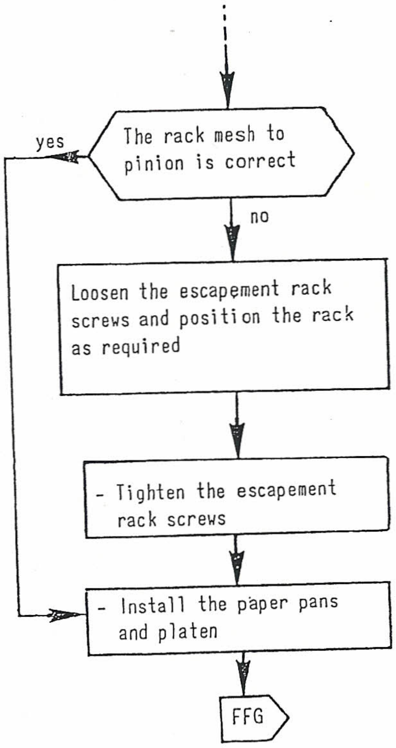
Remove the platen and paper pans

Margin stops set at their extreme positions

Move the carriage slowly back and forth. Check that the rack mesh to pinion is as deep as possible without bottoming over the entire length of the rack. Maximum clearance between the teeth is 0.2 mm (fig.1)*



1

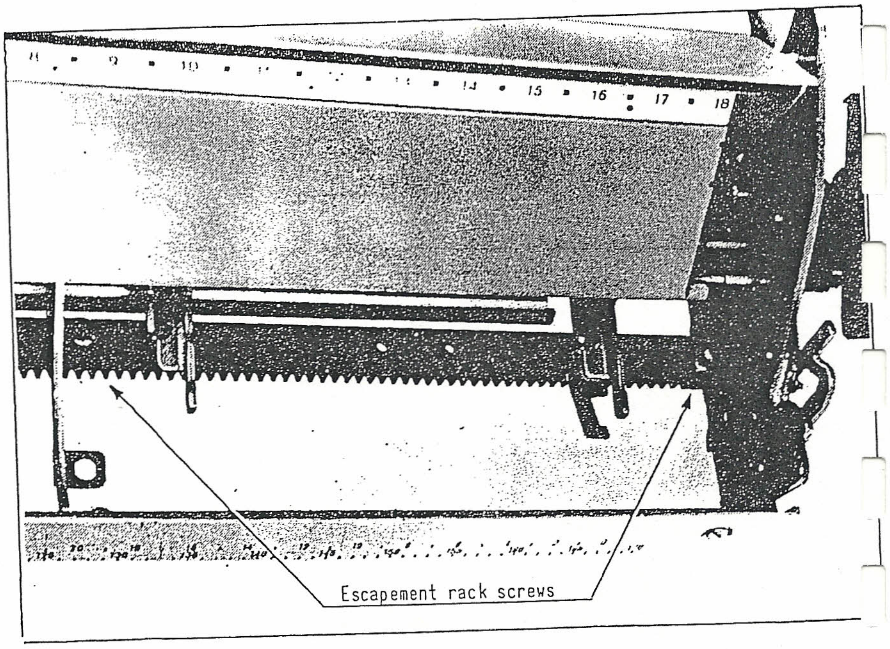


The rack mesh to pinion is correct

Loosen the escapement rack screws and position the rack as required

- Tighten the escapement rack screws

- Install the paper pans and platen

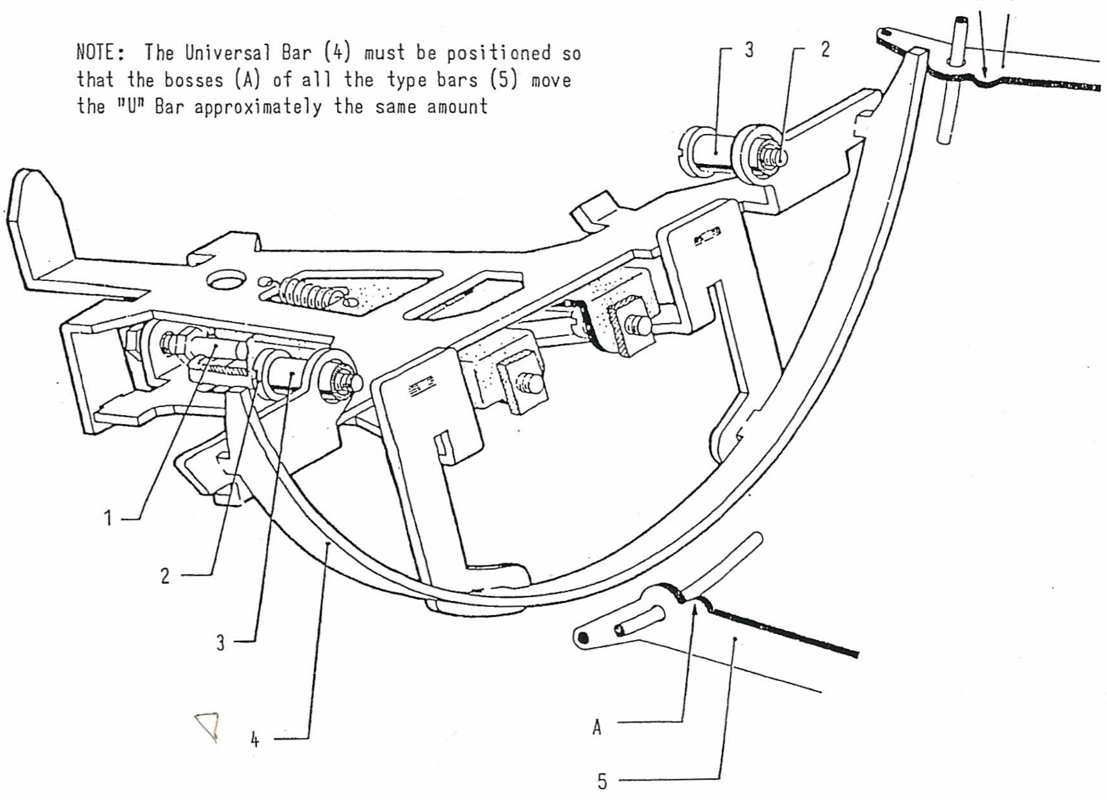


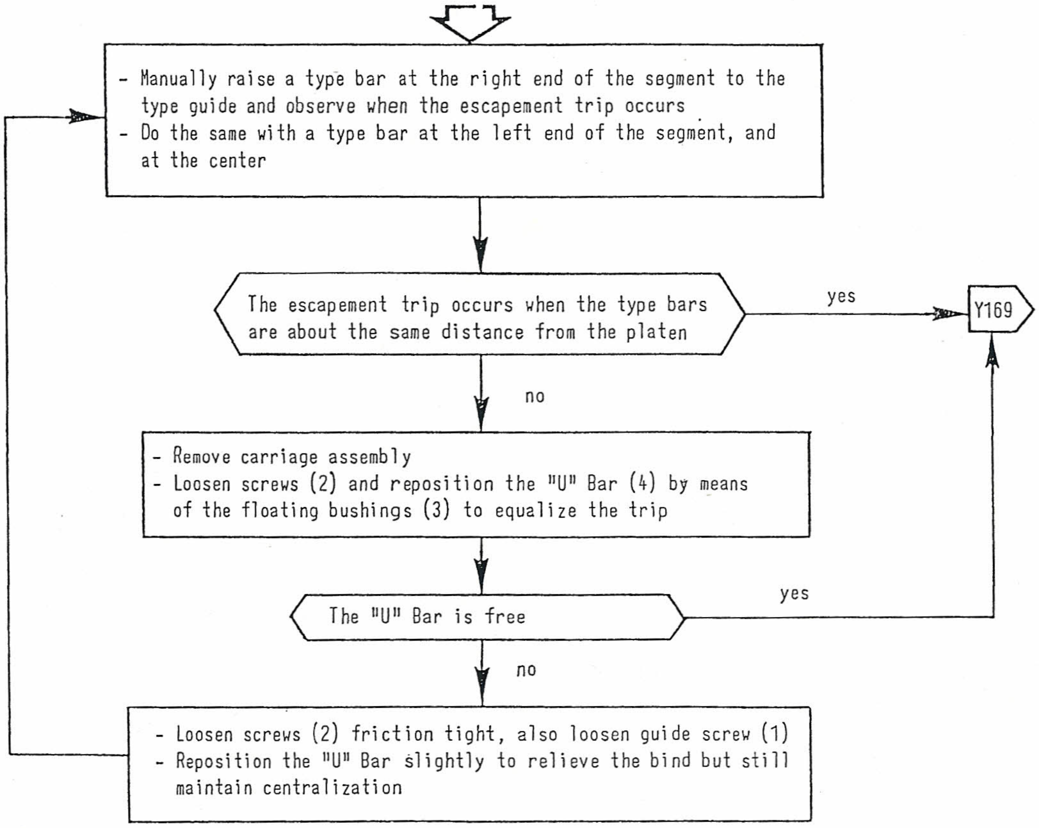
* Note: For checking the rack mesh to pinion:

- Hold the escapement wheel rigid
- Jiggle the carriage slightly while checking the play

UNIVERSAL ("U") BAR ADJUSTMENT (Equalization of Type Bar Trip)

NOTE: The Universal Bar (4) must be positioned so that the bosses (A) of all the type bars (5) move the "U" Bar approximately the same amount





- Manually raise a type bar at the right end of the segment to the type guide and observe when the escapement trip occurs
- Do the same with a type bar at the left end of the segment, and at the center

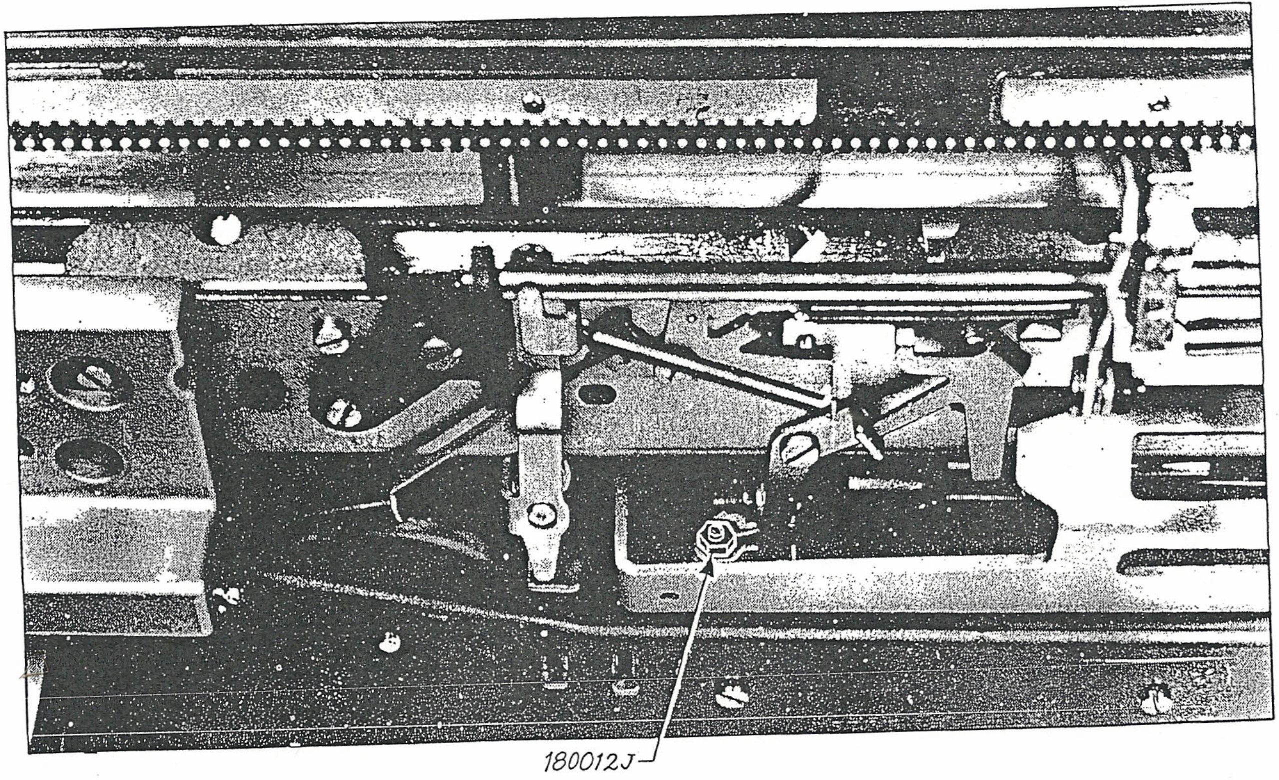
The escapement trip occurs when the type bars are about the same distance from the platen

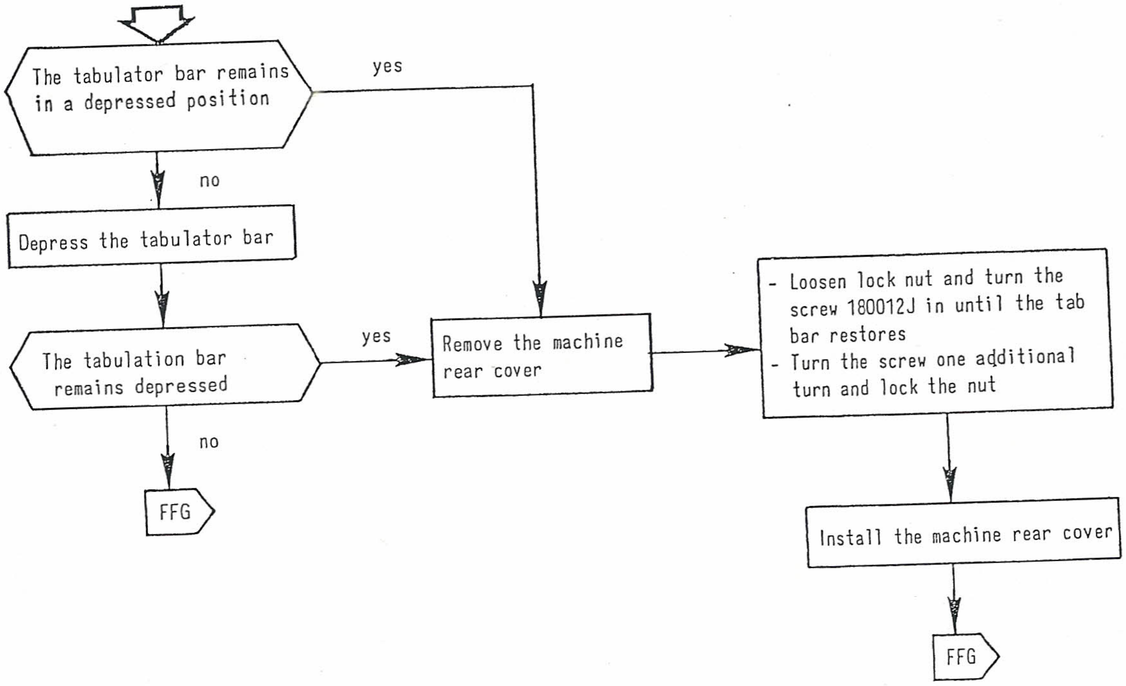
- Remove carriage assembly
- Loosen screws (2) and reposition the "U" Bar (4) by means of the floating bushings (3) to equalize the trip

The "U" Bar is free

- Loosen screws (2) friction tight, also loosen guide screw (1)
- Reposition the "U" Bar slightly to relieve the bind but still maintain centralization

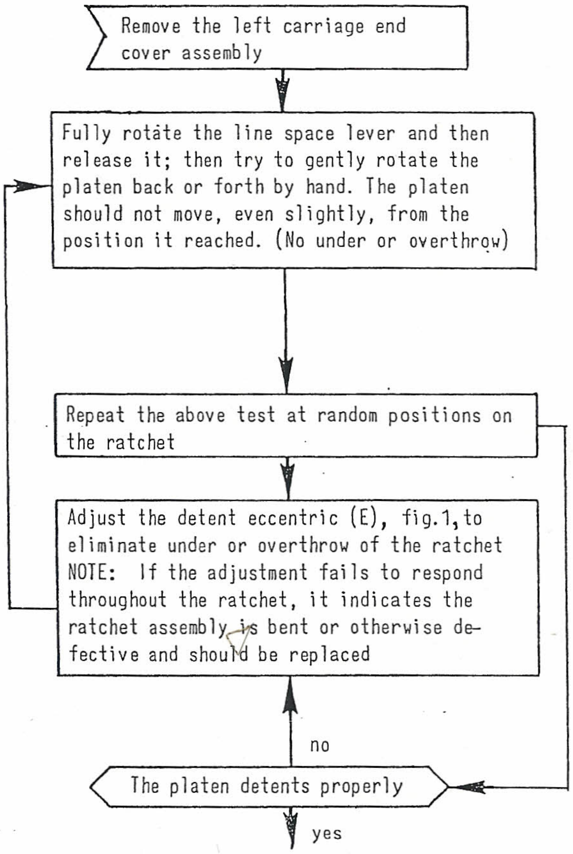
TABULATION RELEASE ADJUSTMENT




The tabulator bar remains in a depressed position
yes
no
Depress the tabulator bar
The tabulation bar remains depressed
yes
no
FFG
Remove the machine rear cover
- Loosen lock nut and turn the screw 180012J in until the tab bar restores
- Turn the screw one additional turn and lock the nut
Install the machine rear cover
FFG

LINE SPACE ADJUSTMENTS

Y122



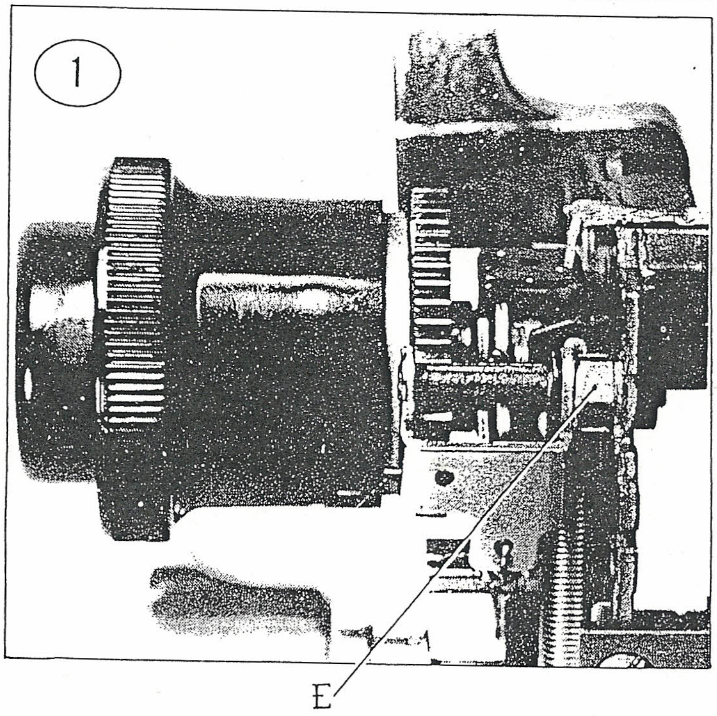
Remove the left carriage end cover assembly

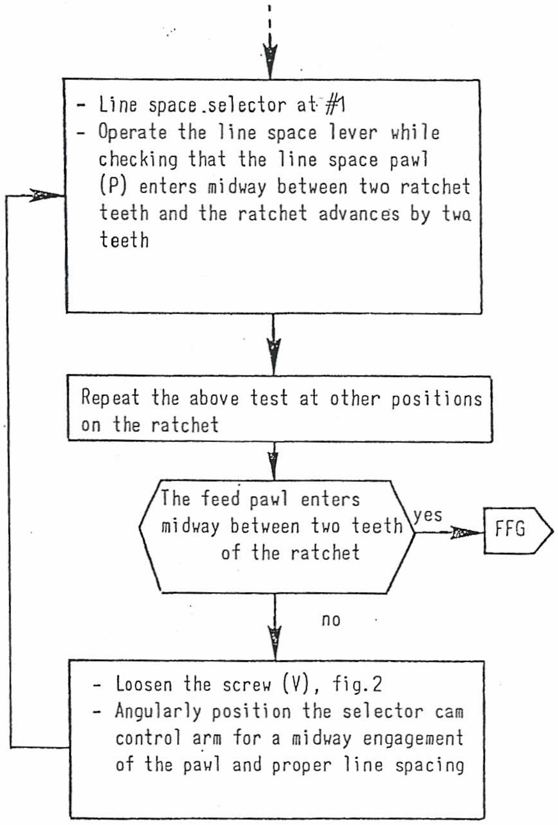
Fully rotate the line space lever and then release it; then try to gently rotate the platen back or forth by hand. The platen should not move, even slightly, from the position it reached. (No under or overthrow)

Repeat the above test at random positions on the ratchet

Adjust the detent eccentric (E), fig.1, to eliminate under or overthrow of the ratchet
NOTE: If the adjustment fails to respond throughout the ratchet, it indicates the ratchet assembly is bent or otherwise defective and should be replaced

The platen detents properly



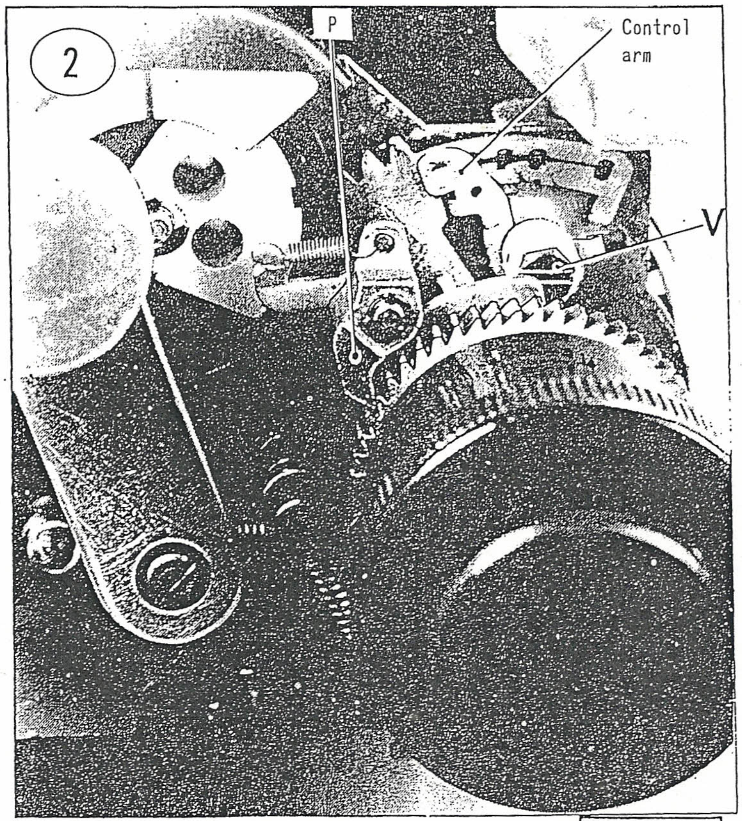


- Line space selector at #1
- Operate the line space lever while checking that the line space pawl (P) enters midway between two ratchet teeth and the ratchet advances by two teeth

Repeat the above test at other positions on the ratchet

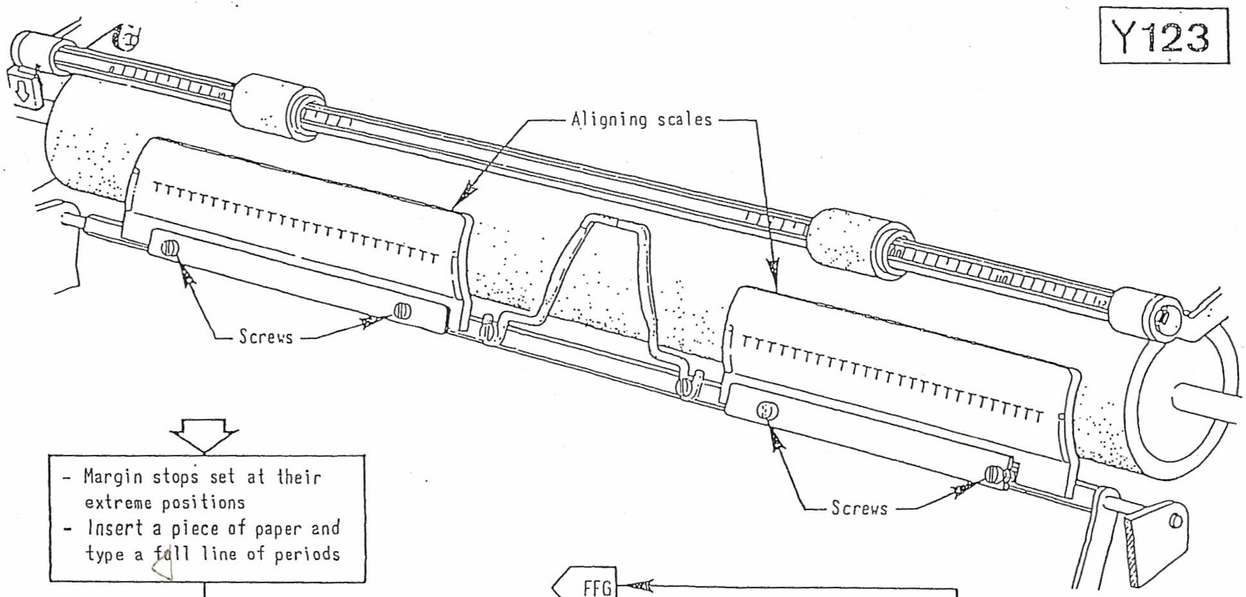
The feed pawl enters midway between two teeth of the ratchet

- Loosen the screw (V), fig.2
- Angularly position the selector cam control arm for a midway engagement of the pawl and proper line spacing



Y122a

ALIGNING SCALE ADJUSTMENTS



- Margin stops set at their extreme positions
- Insert a piece of paper and type a full line of periods

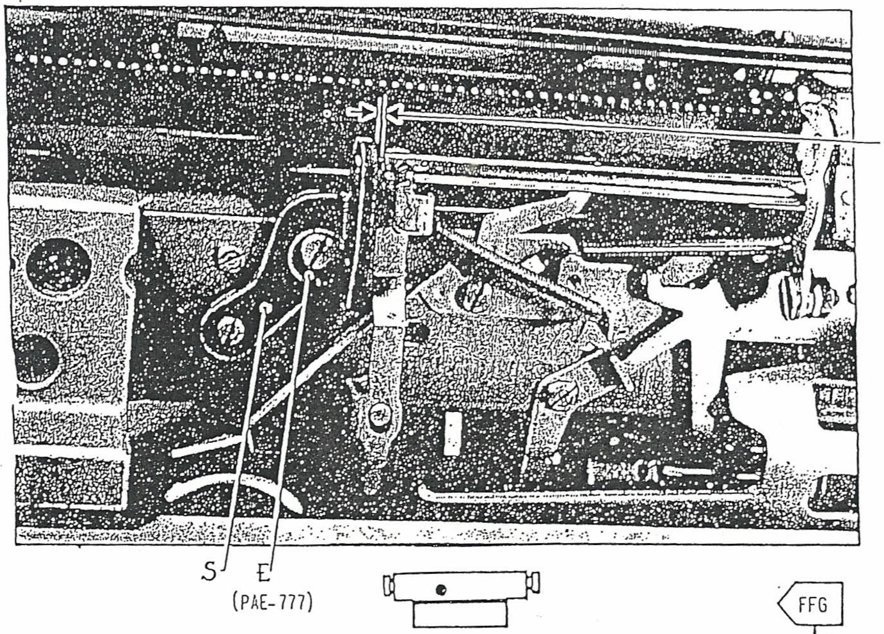
Press the aligning scales against the platen

The tops of the "T" graduations just touch and are centered to the periods

yes → FFG

no → Loosen the aligning scale screws and adjust the scales as required. Retighten the screws. → FFG

BANKING ADJUSTMENT



Banking Gap

0.8 to 1.2 mm for 10 & 12 pitch
0.4 to 0.6 mm for 16 pitch

Remove the machine rear cover

Checking banking gap required in the photo

The gap is correct

yes → FFG

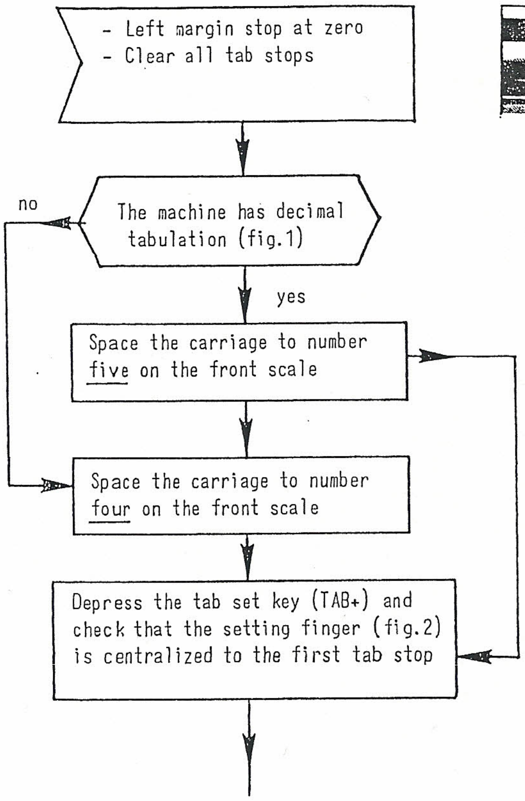
no →

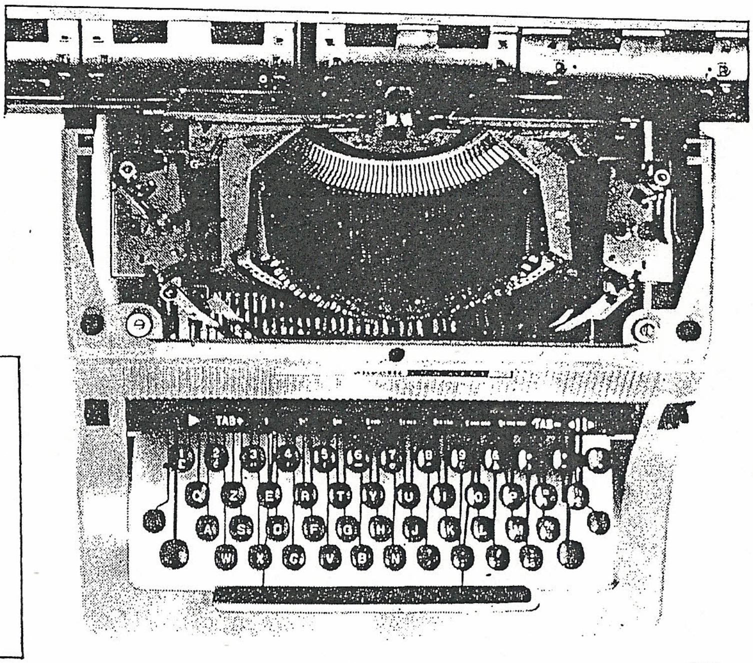
- Adjust the support bracket (S) as required
- If the eccentric stop (E) is on machine, adjust it to support the bracket (S)
- If there is no eccentric stop (E) on the machine, install one using part number PAE-777

Install the machine rear cover

FFG

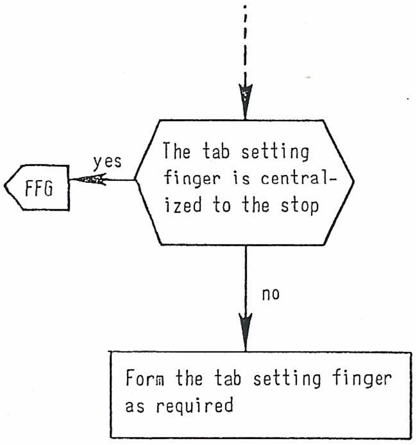
TAB SETTING FINGER ADJUSTMENT

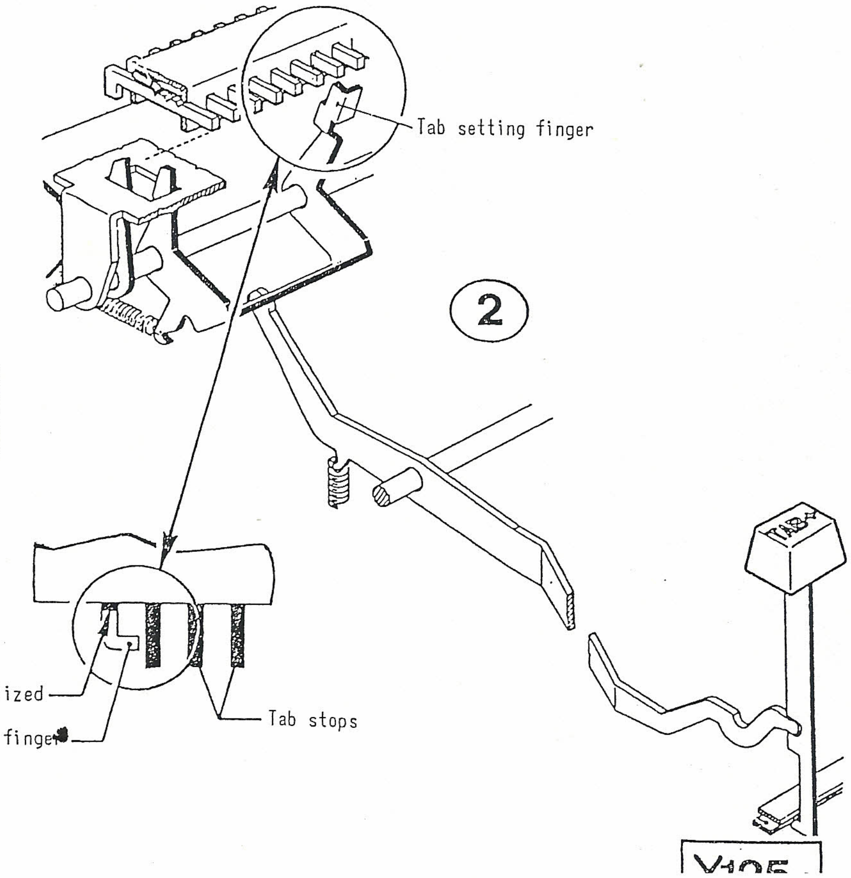

- Left margin stop at zero
- Clear all tab stops
The machine has decimal tabulation (fig.1)
no
yes
Space the carriage to number five on the front scale
Space the carriage to number four on the front scale
Depress the tab set key (TAB+) and check that the setting finger (fig.2) is centralized to the first tab stop



Decimal tabulator machine

①


The tab setting finger is centralized to the stop
yes
FFG
no
Form the tab setting finger as required



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ESCAPEMENT DOG RELEASE DURING TABULATION ADJUSTMENT

Y126

- Remove carriage assy.
- Remove machine cover

The clearances between the eccentric and plunger are as shown in the figure

yes

no

Adjust the eccentric stud for approx. 1 mm clearance at rest position and still keeping the 0 to 0.2 mm overlap within range

Slowly depress the tab bar and release it as soon as the carraige moves; the tab bar must remain down

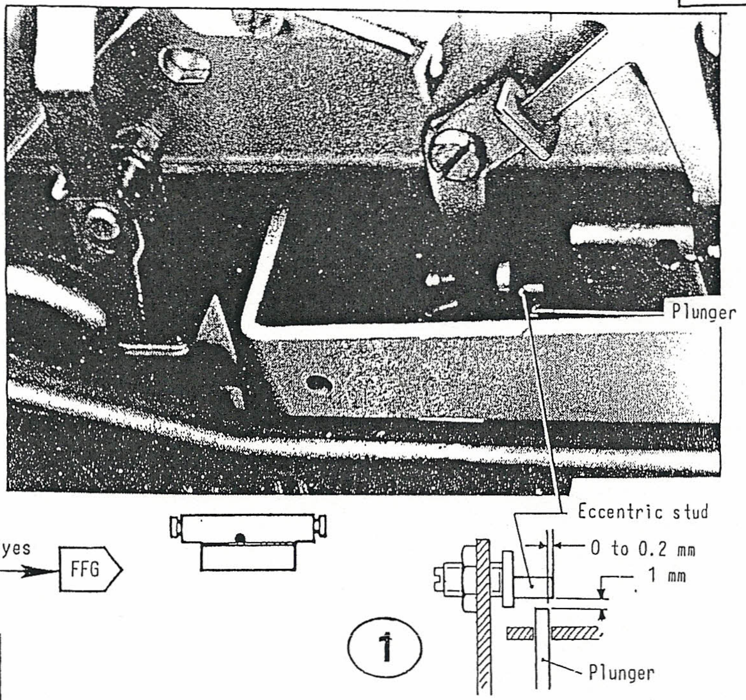
The tab bar remains down

yes

FFG

no

Adjust the eccentric stud, slightly modifying the 1 mm clearance adjustment as required



SPACE BAR TRIP ADJUSTMENT

- Slowly depress the space bar
- Check that the esc. trip occurs when the space bar has been depressed halfway

The trip occurs at the right time

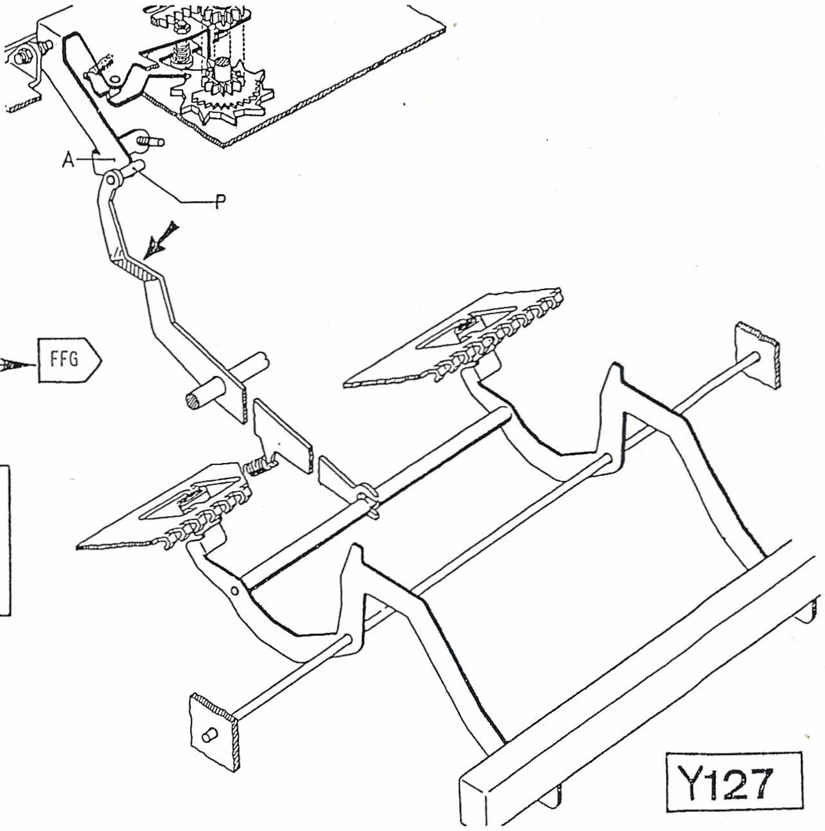
yes

FFG

no

- Remove the bottom cover
- Form the space bar trip lever at the shaded area as required
- At rest position the stud (P) must clear the arm (A) slightly

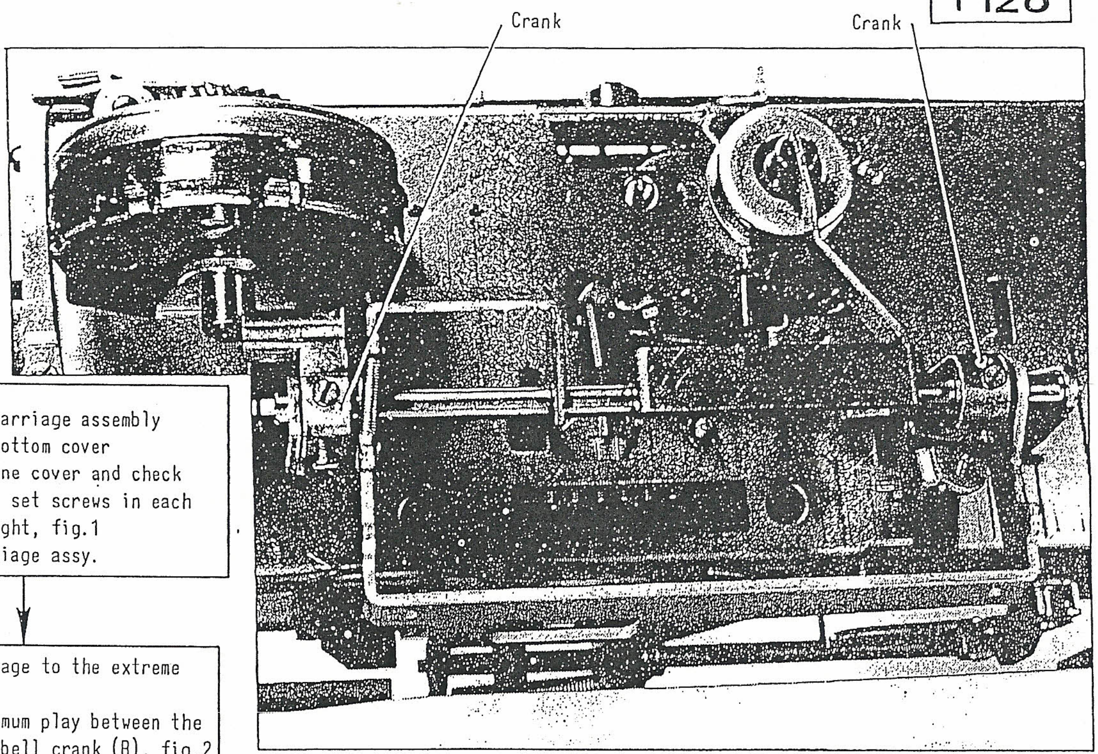
FFG



Y127

BACKSPACE ADJUSTMENT

①



- Remove the carriage assembly
- Remove the bottom cover
- Remove machine cover and check that the two set screws in each crank are tight, fig.1
- Install carriage assy.

- Move the carriage to the extreme left
- Check for minimum play between the crank (A) and bell crank (B), fig.2

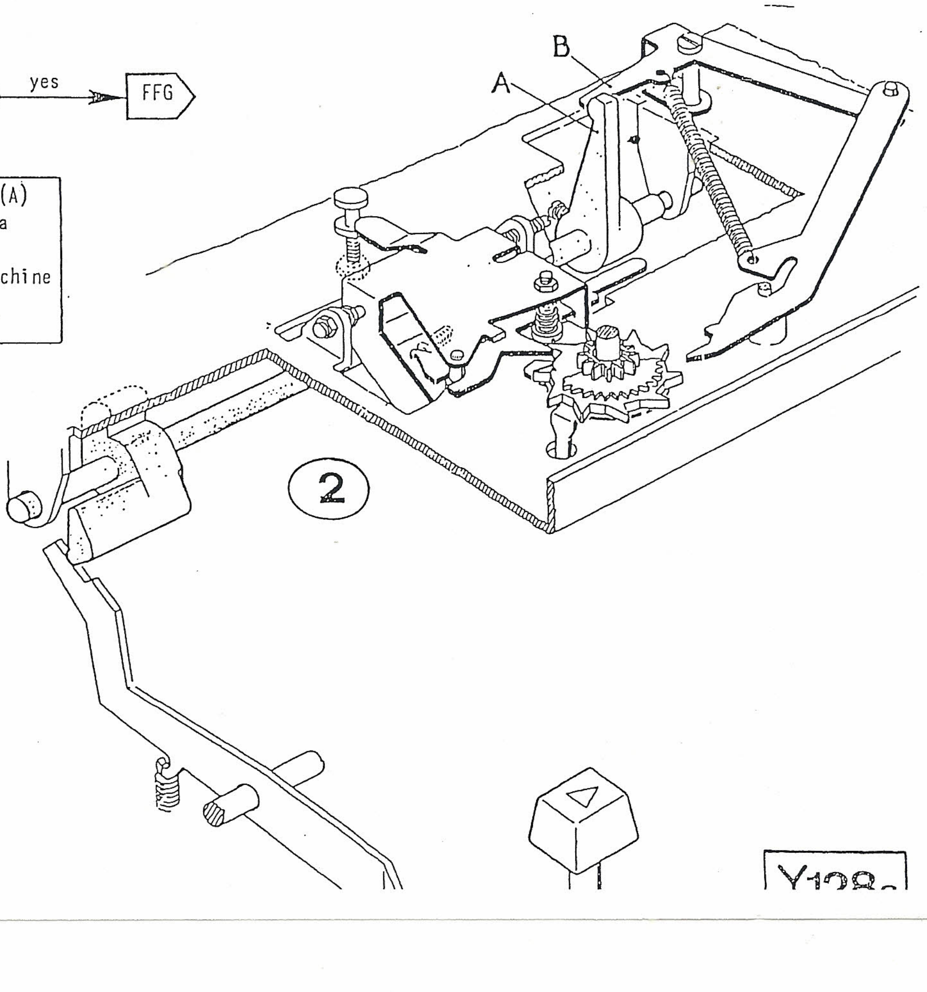
The minimum play is correct

yes → FFG

no

- Loosen the set screws in crank (A) and adjust the crank to obtain a minimum clearance
- Replace the bottom cover and machine cover

FFG



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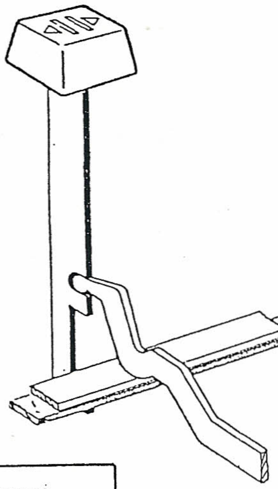
MARGIN RELEASE SHAFT REST POSITION ADJUSTMENT



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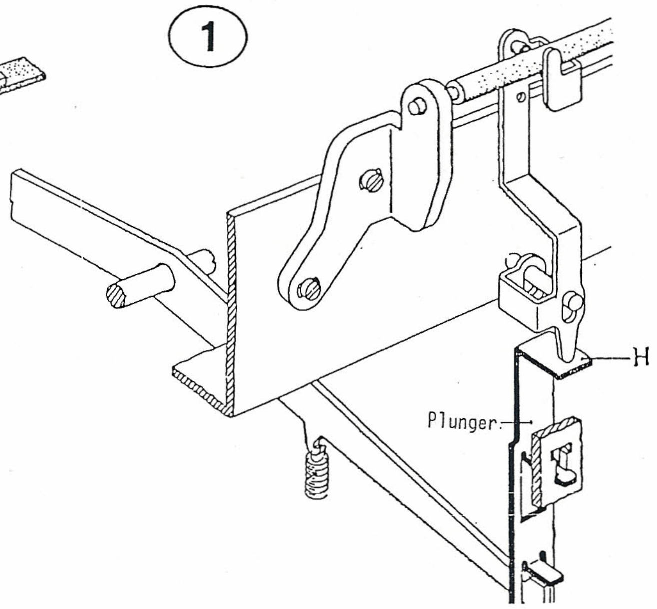

Remove the machine rear cover

Move the carriage back and forth while observing the passing clearance of 1 to 1.5 mm between the banking stop extension (A) and the paragraph indentation wing (B), fig.2

The passing clearance of 1 to 1.5 mm is correct, fig.2

yes → Reassemble the rear cover

no

Obtain the clearance by forming wing (C) of the plunger, fig.1

Reassemble the rear cover

FFG.

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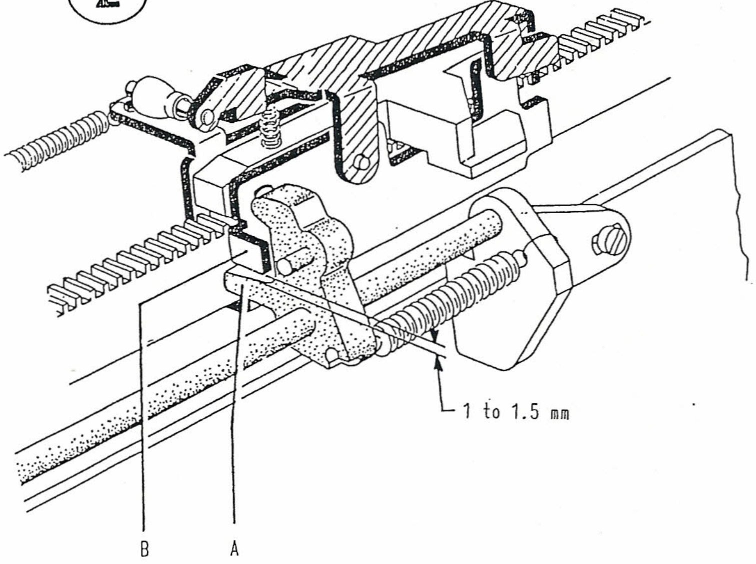
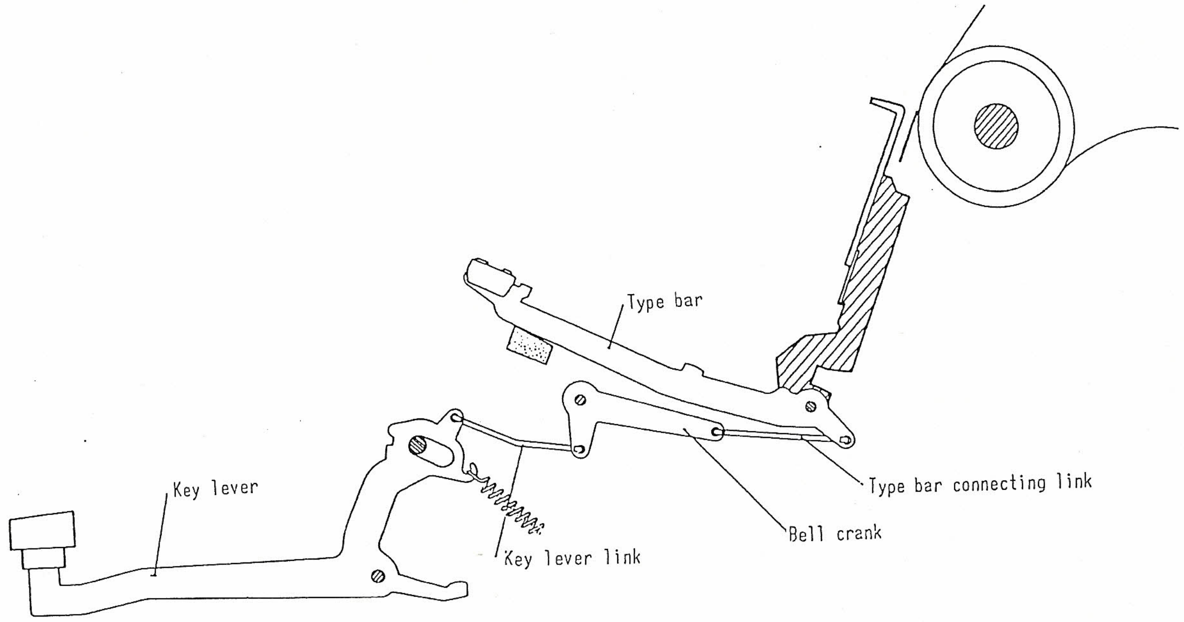
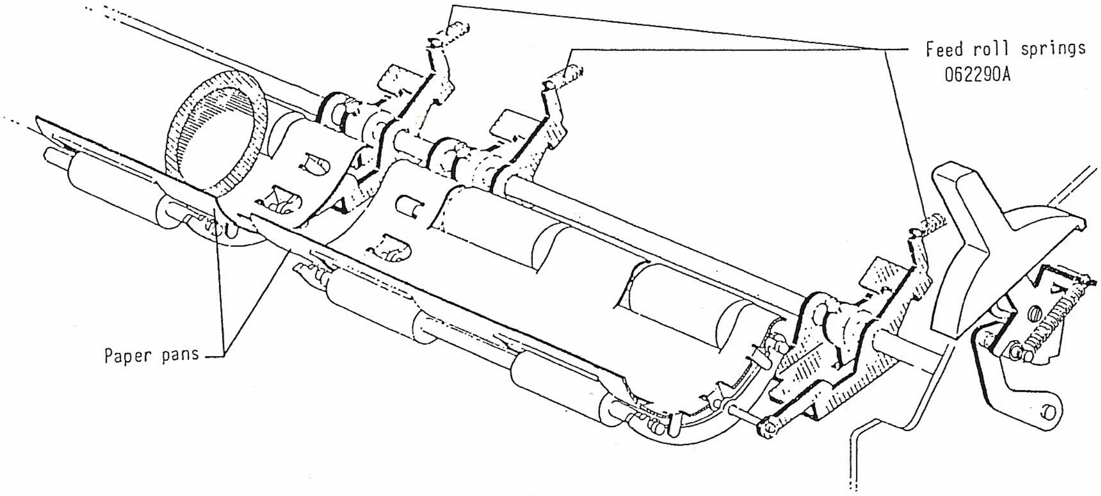


LINEA 88 TYPE ACTION MECHANISM



LINEA 88 FEED ROLL PRESSURE SPRINGS 062290A



- Remove paper pans

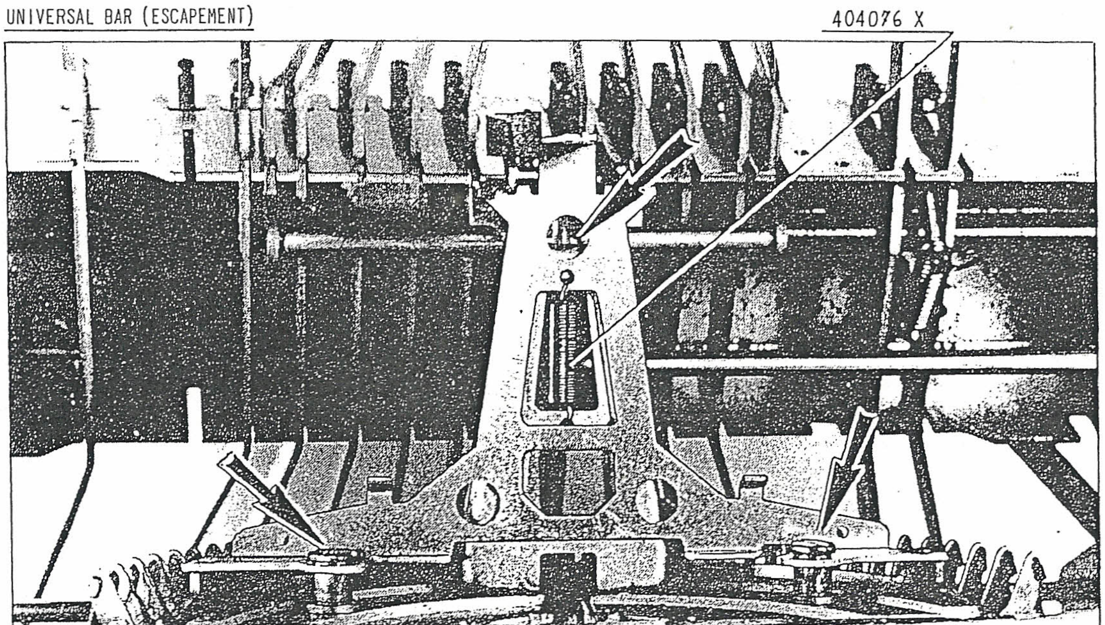
  If one or more free roll springs require replacement, be sure that the tension of the new spring(s) 062290A is the same as the remaining springs to ensure equal feed roll pressure, otherwise replace all of them.

MACHINE SIDE WALLS

W 68

- Check that all side wall securing screws are tight, then perfomr check Y113

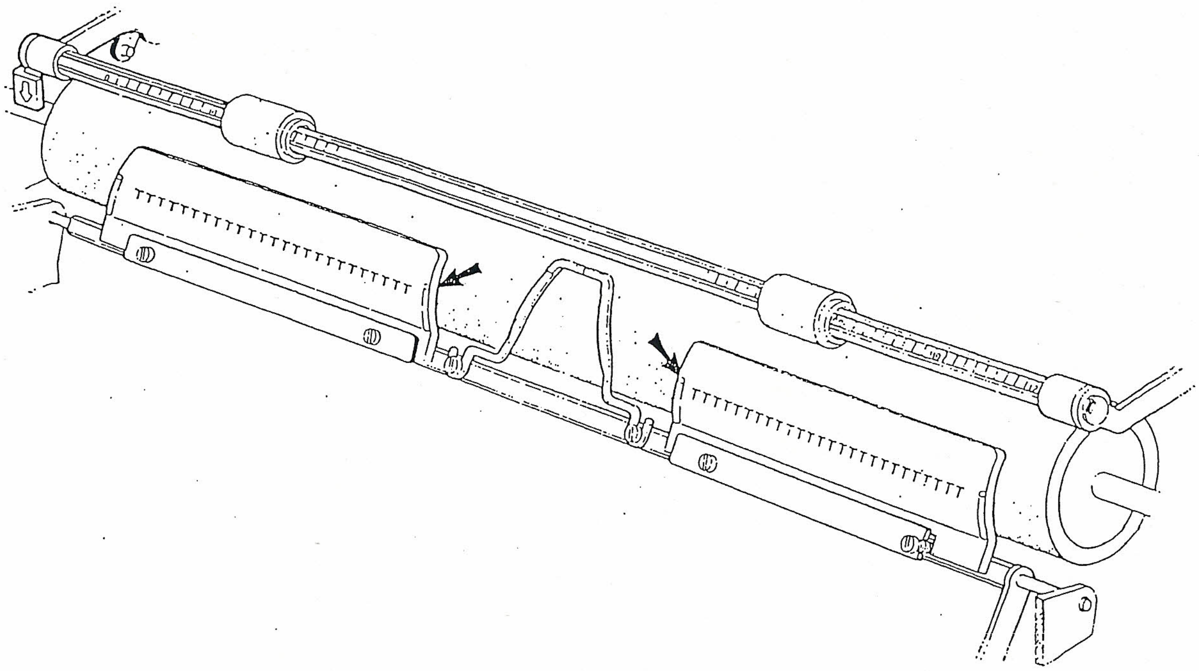
UNIVERSAL BAR (ESCAPEMENT)



- Clean and lubricate the bearing surfaces indicated by the arrows.
- Check that the spring 404076X is strong enough to restore the universal bar with a light, snappy action.

W 69

ALIGNING SCALES (TRANSPARENT)

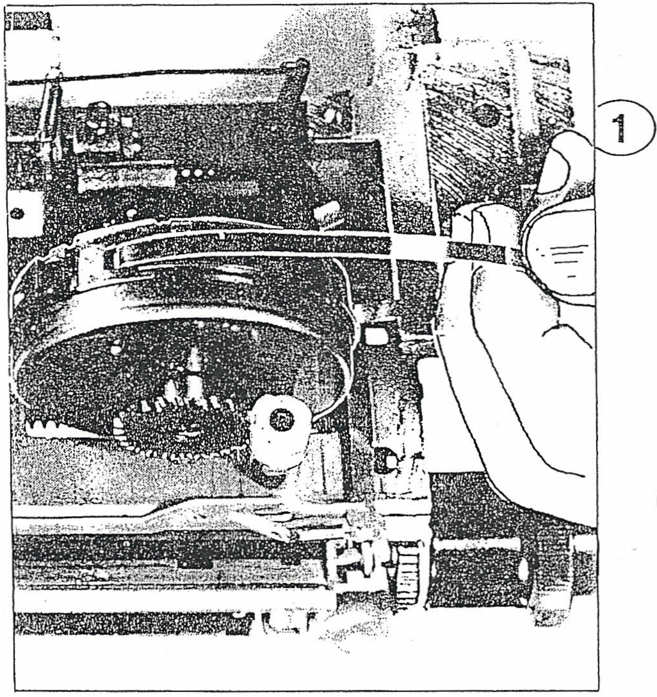


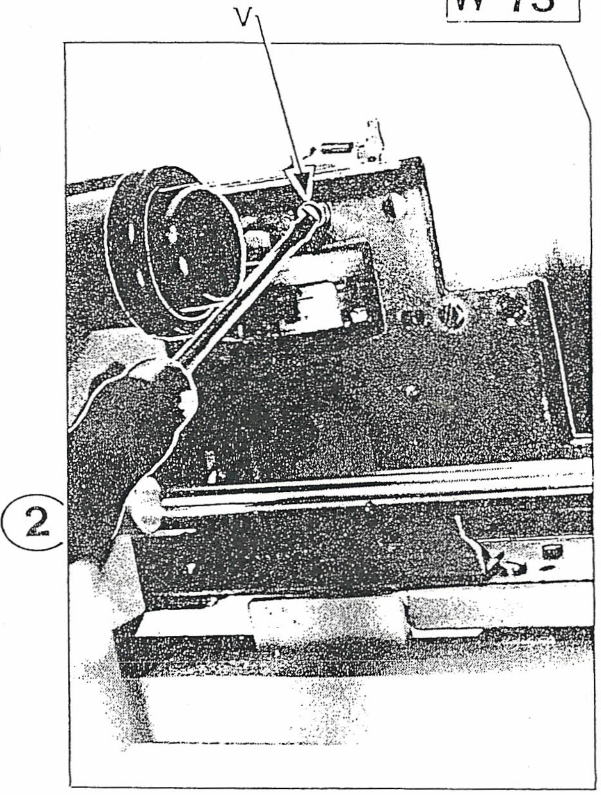
If the aligning scales have sharp edges:

File the scales in the area indicated or replace them.
If the aligning scales are broken (refer to the part numbers below)
replace same and go to Y123

Sign on Scale	Part #
1/12"	064287V
1/10"	060098B
28	064285T
314	064286U
508	064288E

CARRIAGE DRAWBAND





If the drawband is broken:

- Remove the carriage assembly
- Move the carriage to zero position

Remove the broken drawband. Obtain a new drawband of the same length. Insert the clip end of the band under the carriage, passing it along and under the escapement rack

Place the hooked end of the drawband into the proper slot in the main spring drum (fig.1), and the clip end into the notch at the end of the rack

Using a screwdriver, push down and turn screw (V) fig. 2 until the slack is removed from the drawband

Install the carriage assembly on the machine. Turn screw (V) until the main spring has rotated 5 to 6 times. Check for proper tension by using a scale and the table below:

For 11", 13", and 15" carriages:

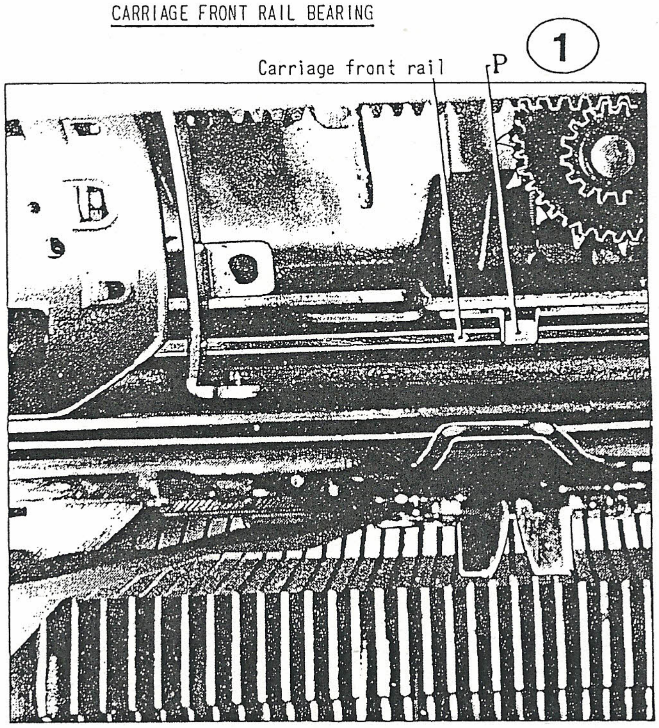
The tension should be about 600 grs. (21 ozs) at the end of the writing line and 1300 grs. (46ozs) at zero position

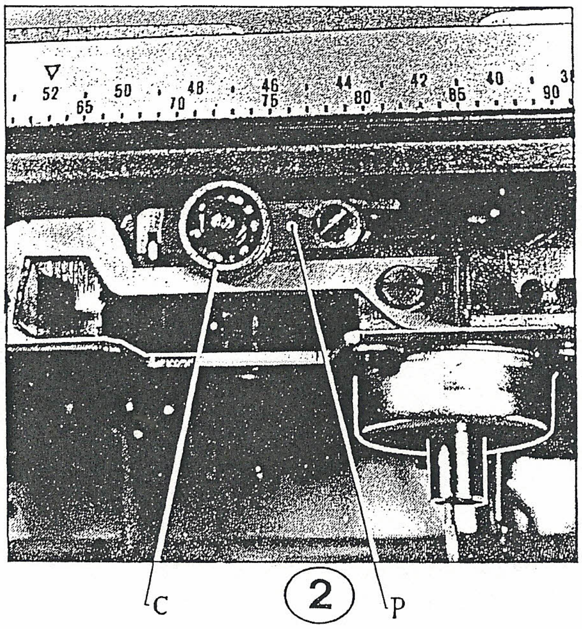
For 18" and 27" carriages:

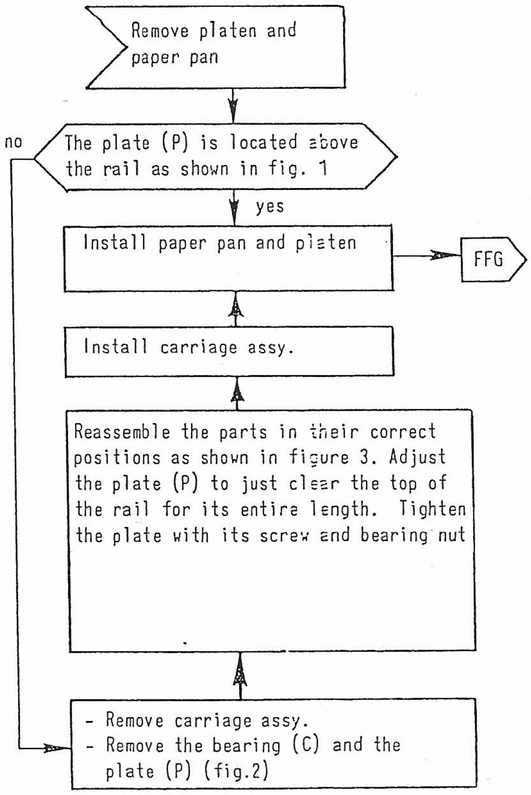
700 grs. (25 ozs) at end of writing line and 1500 grs. (53 ozs) at zero position

FFG

CARRIAGE FRONT RAIL BEARING







Remove platen and paper pan

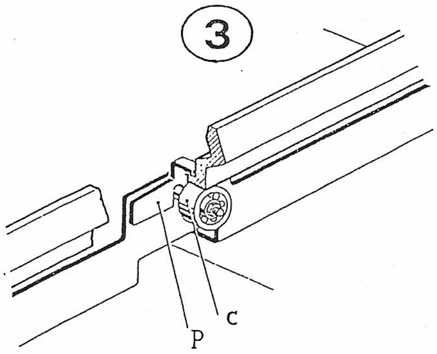
The plate (P) is located above the rail as shown in fig. 1

Install paper pan and platen

Install carriage assy.

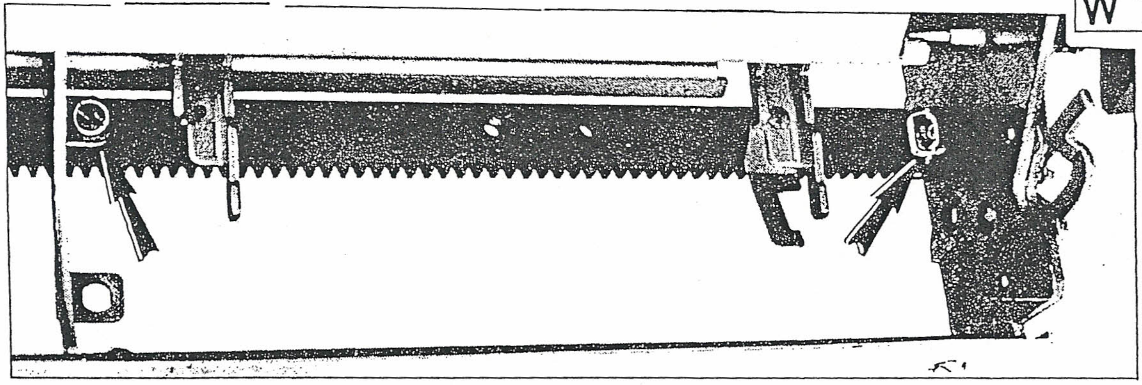
Reassemble the parts in their correct positions as shown in figure 3. Adjust the plate (P) to just clear the top of the rail for its entire length. Tighten the plate with its screw and bearing nut

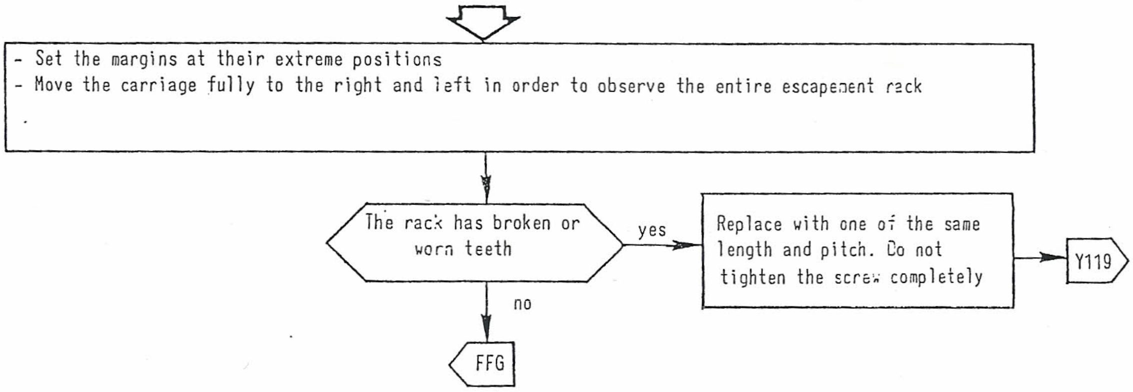
- Remove carriage assy.
- Remove the bearing (C) and the plate (P) (fig.2)



W 75

ESCAPEMENT RACK





- Set the margins at their extreme positions
- Move the carriage fully to the right and left in order to observe the entire escapement rack

The rack has broken or worn teeth

yes

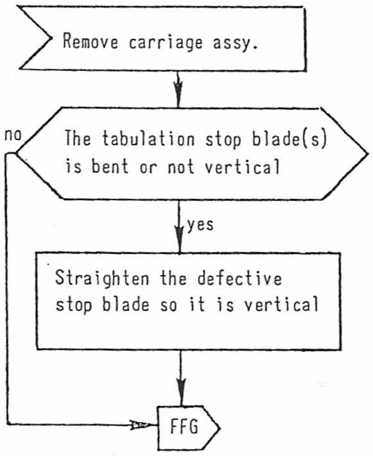
Replace with one of the same length and pitch. Do not tighten the screw completely

Y119

no

FFG

TABULATOR STOP BLADES



Remove carriage assy.

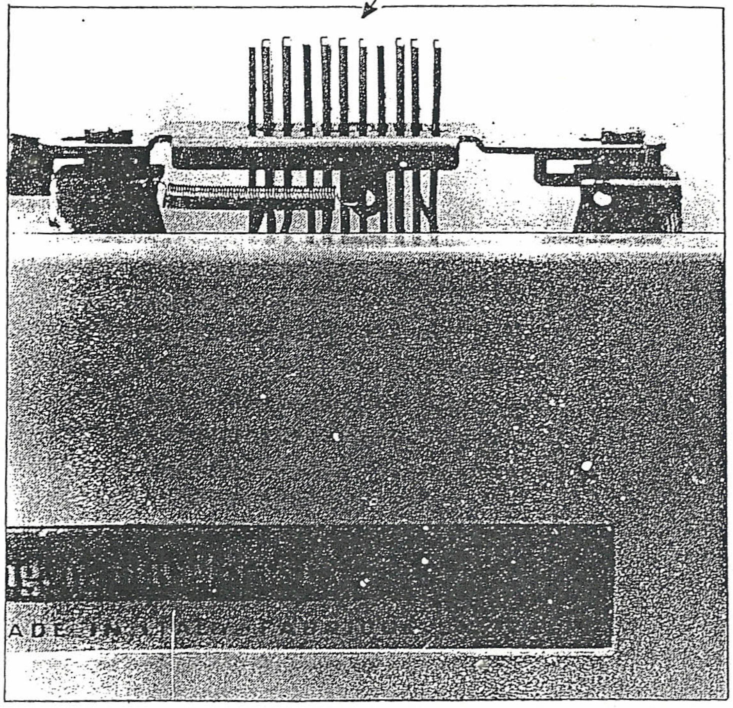
The tabulation stop blade(s) is bent or not vertical

no

yes

Straighten the defective stop blade so it is vertical

FFG


Tabulator stop blades

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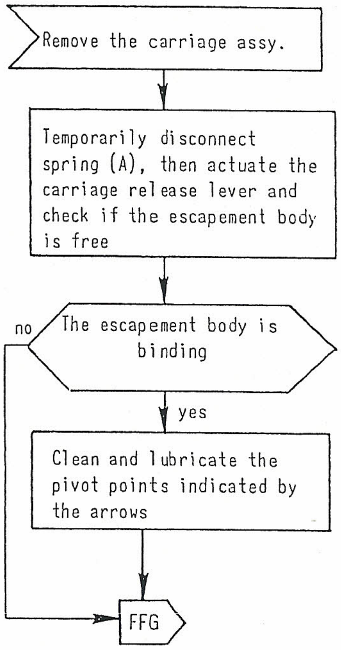
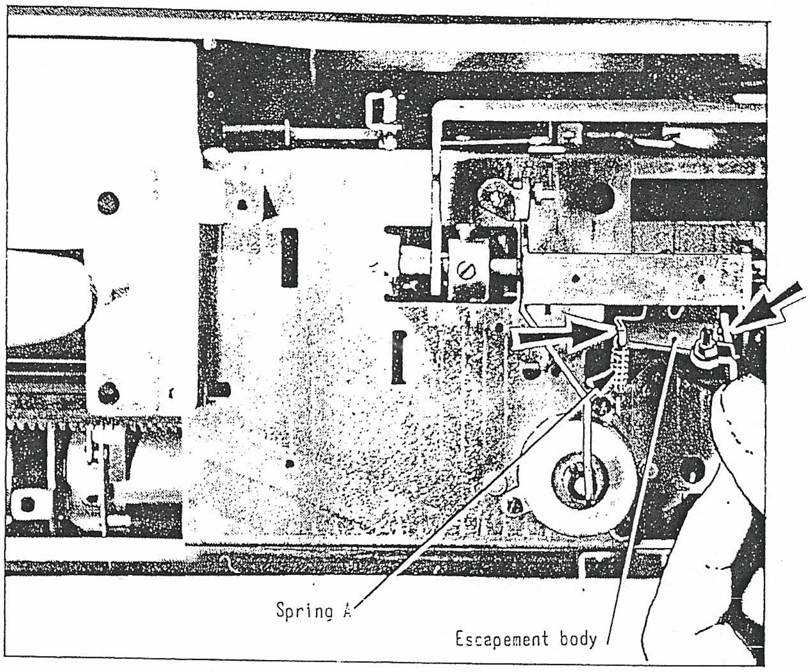
ESCAPEMENT BODY


Remove the carriage assy.

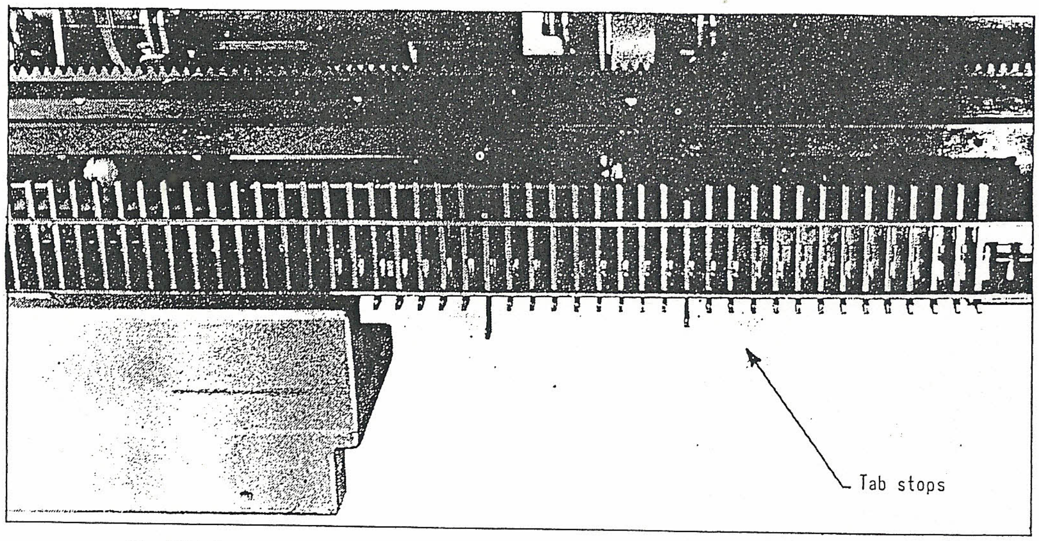
Temporarily disconnect spring (A), then actuate the carriage release lever and check if the escapement body is free

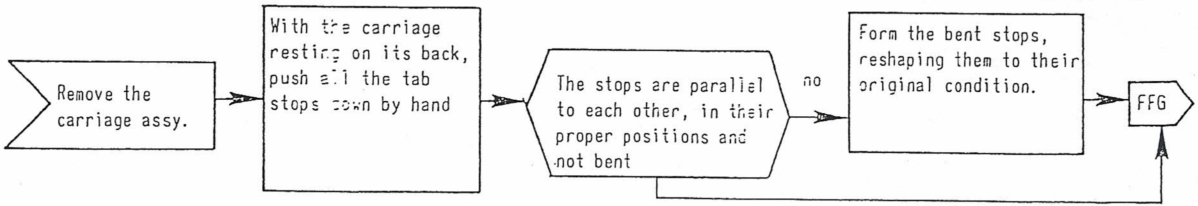
The escapement body is binding

Clean and lubricate the pivot points indicated by the arrows



TABULATOR STOPS




Remove the carriage assy.

With the carriage resting on its back, push all the tab stops down by hand

The stops are parallel to each other, in their proper positions and not bent

Form the bent stops, reshaping them to their original condition.

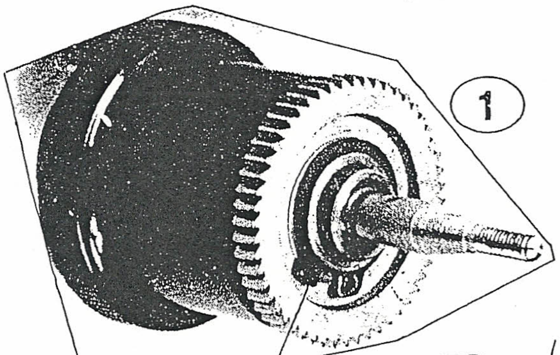
✓

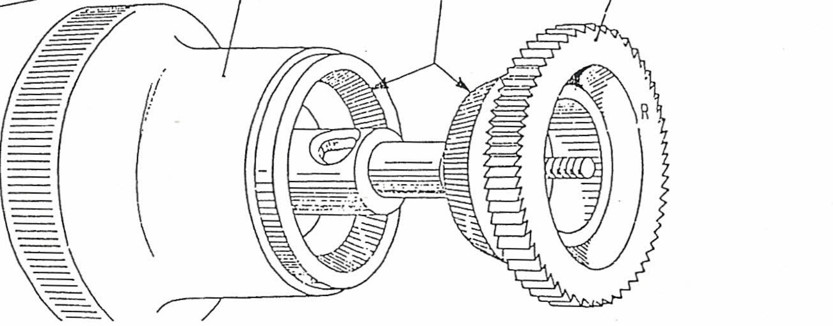
PLATEN VARIABLE

Remove the variable knob by unscrewing it from the platen → Remove the retaining clip(s) and the line space ratchet, fig.1 → The serrated teeth of the cluth are worn (fig.2)

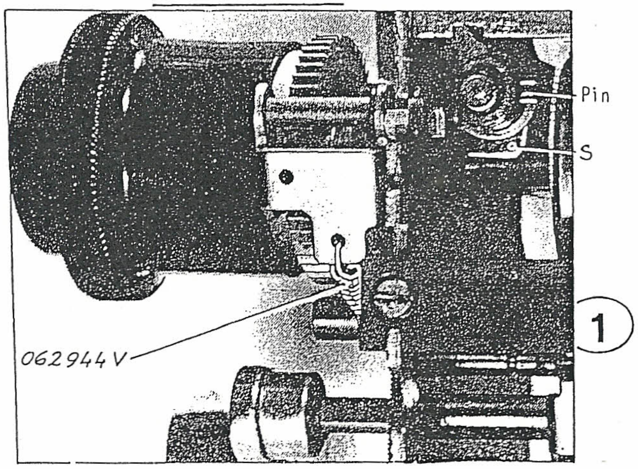
no → Reassemble the variable → FFG

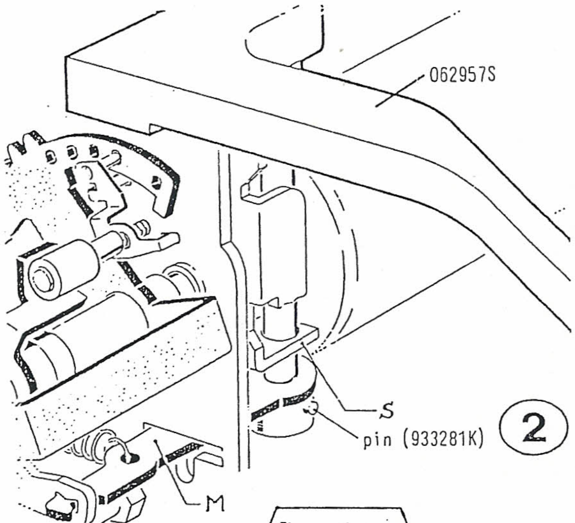
yes → Replace the defective parts → Reassemble the variable





LINE SPACE MECHANISM





Remove the platen and the carriage left end cover assembly → The support bracket (S) is broken. The pin is missing (fig.2)

yes → Send to shop for repair and modification (TIB-BB-2 item 8)

no → The crank (M) is broken (fig.2)

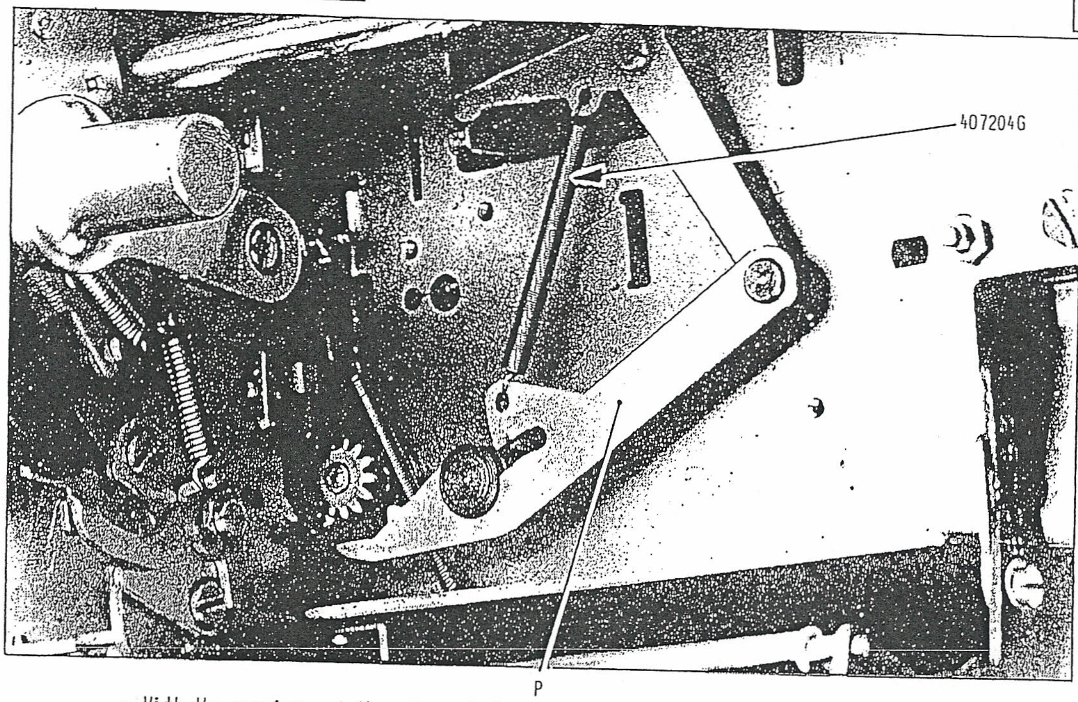
yes → Replace with a new assembly 062957S fig.2

no → The spring 062944V (fig.1) is broken or unhooked

yes → Rehook or replace the spring

no → FFG

BACKSPACE PAWL



- With the carriage at the extreme left position, check if the back space pawl (P) is binding, or if the spring 407204G is broken, weak or missing

MARGIN RELEASE SHAFT

Remove the paper table

The margin release shaft is broken — no → FFG

yes

Unhook the spring (M) from the shaft. Remove support bracket (S)

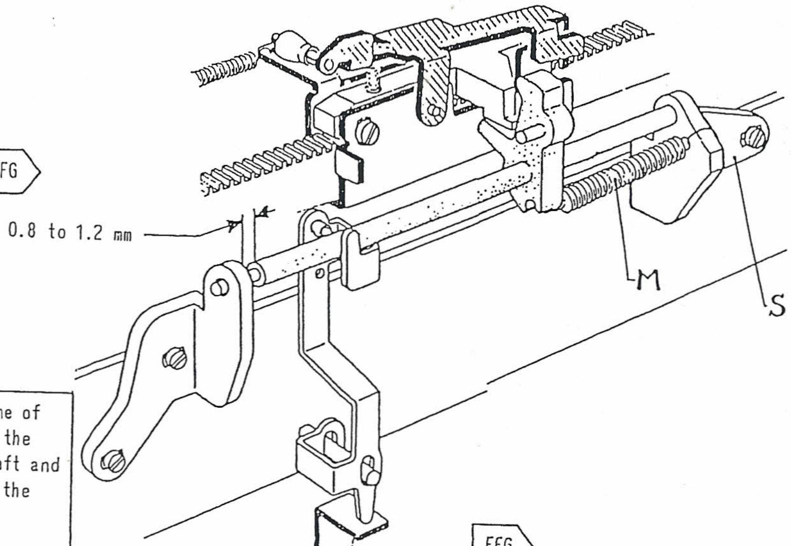
Replace the margin release shaft with one of the same type (observe the lettering on the "banking stop" of the margin release shaft and compare it with the chart below to find the part number)

E	064270P
WP	062028S
Gr	064271C
A	064269J
G	064272D

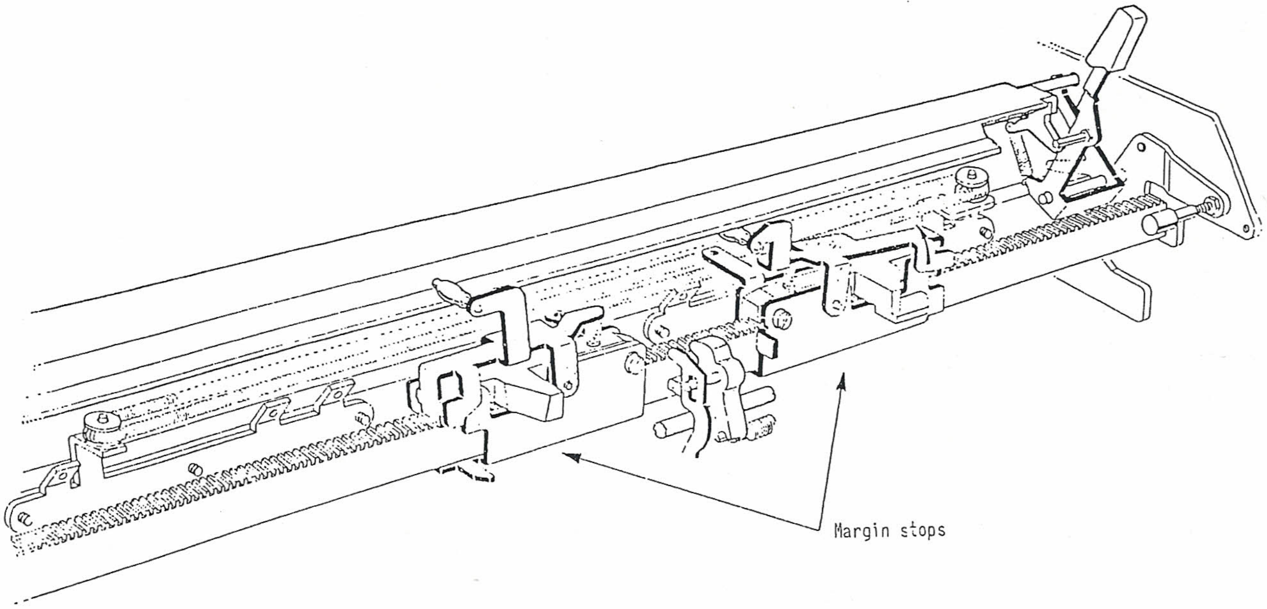
Reassemble the support bracket (S) leaving the screws friction tight. Rehook the spring (M)

Adjust support bracket (S) until the gap is as indicated in the figure

FFG



MARGIN STOPS



- To observe the action of the margin stops, remove the paper table.

MARGIN RELEASE SHAFT PLUNGER 062022L

Remove the carriage assy.

The plunger 062022L is in its proper place (fig. 1) — yes → FFG

no

Position the plunger correctly (fig.1)

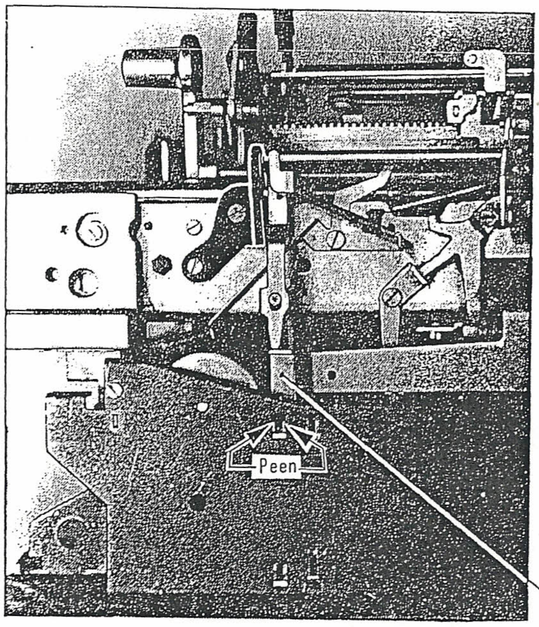
To prevent the plunger from dislodging, peen the upper part of the guide slot in the machine rear plate as indicated by the arrows in figures 1 and 2

Install the carriage assy.

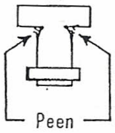
The plunger is aligned to the slide as shown in fig.3 — yes → FFG

no → Form the plunger at the shaded area shown in fig. 3 as required → FFG

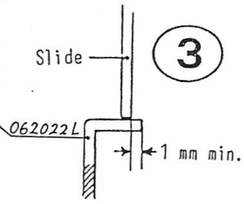
1



2



3



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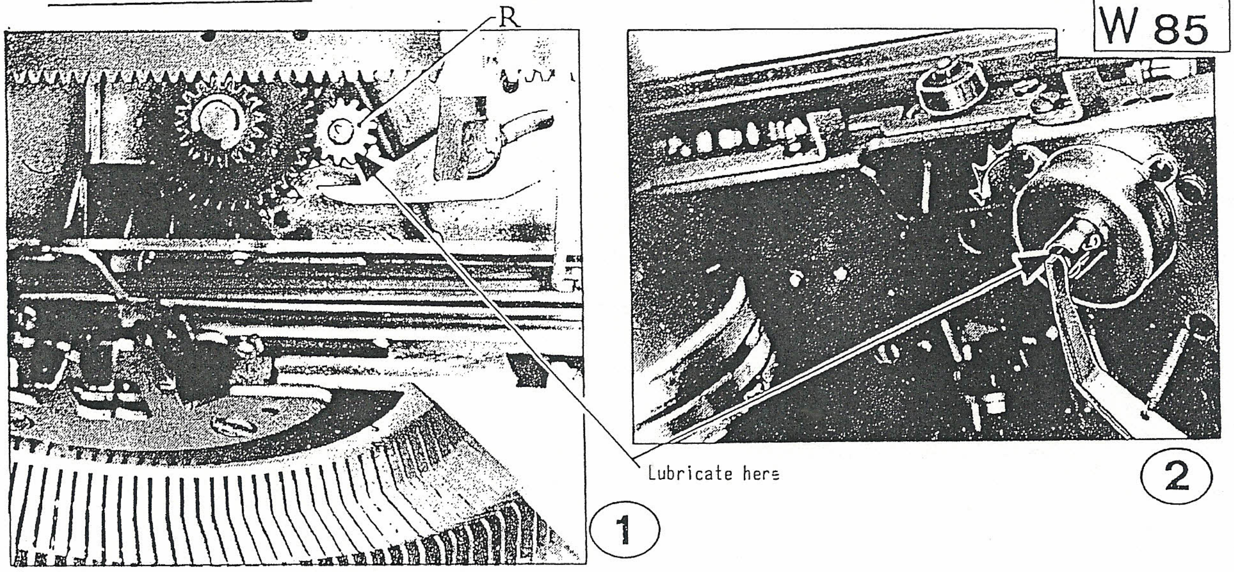
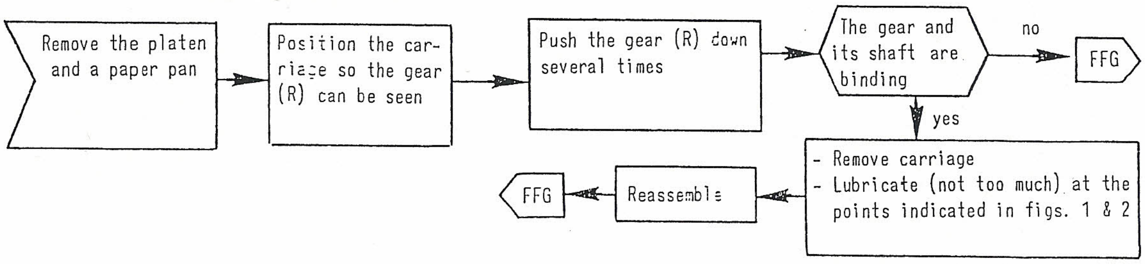
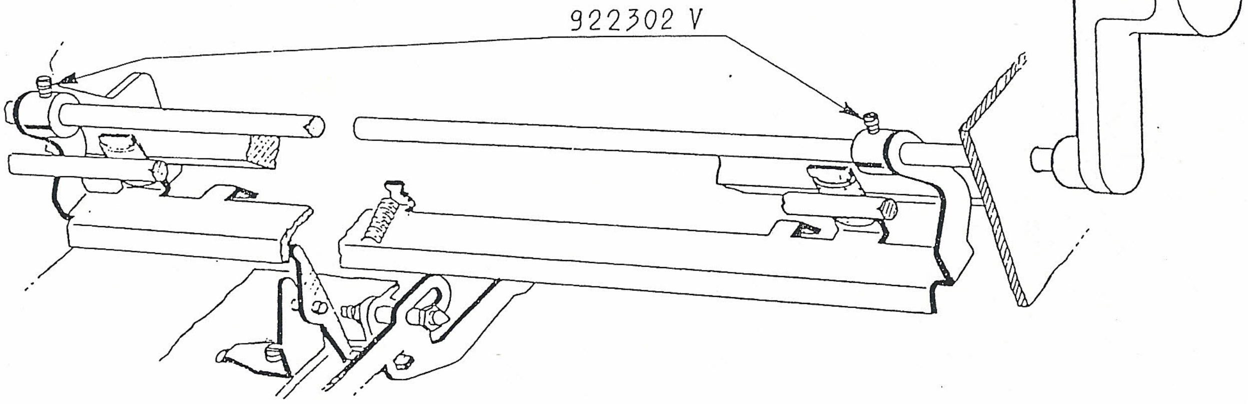
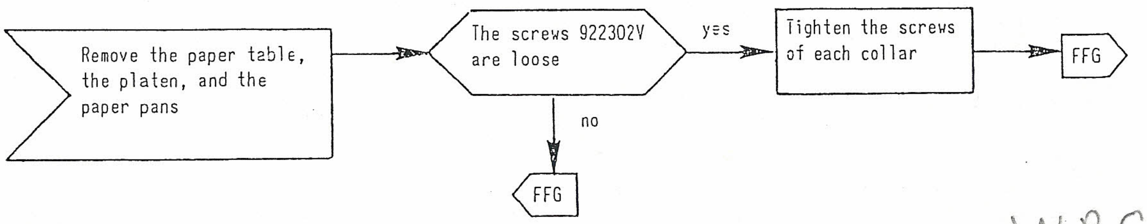
TABULATOR CENTRIFUGAL BRAKE




Remove the platen and a paper pan
Position the carriage so the gear (R) can be seen
Push the gear (R) down several times
The gear and its shaft are binding
no
FFG
yes
- Remove carriage
- Lubricate (not too much) at the points indicated in figs. 1 & 2
Reassemble
FFG

CARRIAGE RELEASE FRAME




Remove the paper table, the platen, and the paper pans
The screws 922302V are loose
yes
Tighten the screws of each collar
FFG
no
FFG

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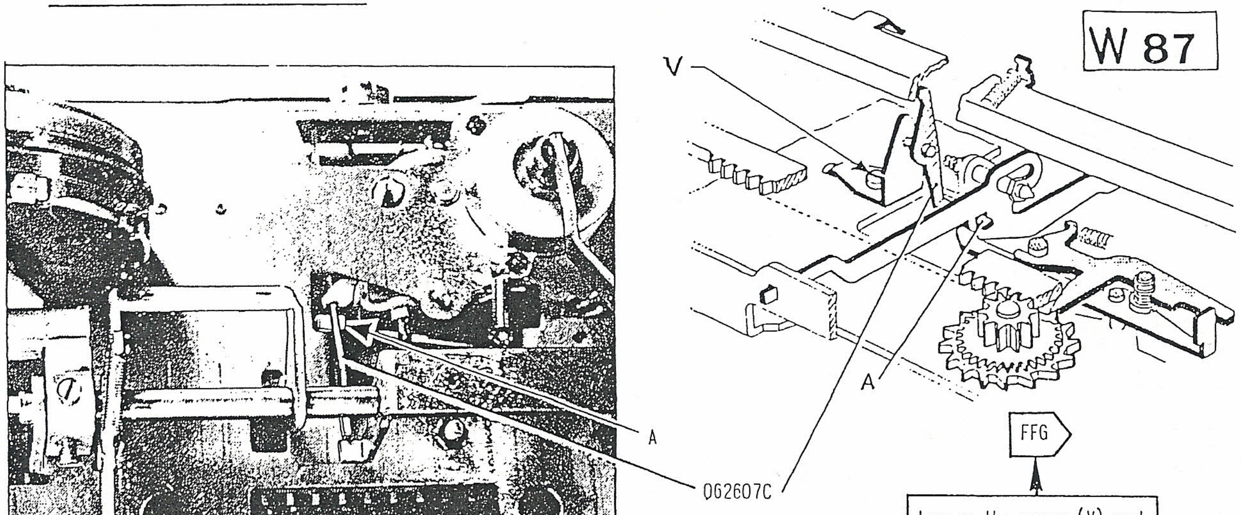
ESCAPEMENT RELEASE ROCKER 062607C



Move the carriage fully to the right

Remove the platen and the left paper pan

Check that the escapement release rocker 062607C is in its proper place with its wing (A) engaged in the slot of the esc. release slide as shown above.

The rocker 062607C is in its proper place

no

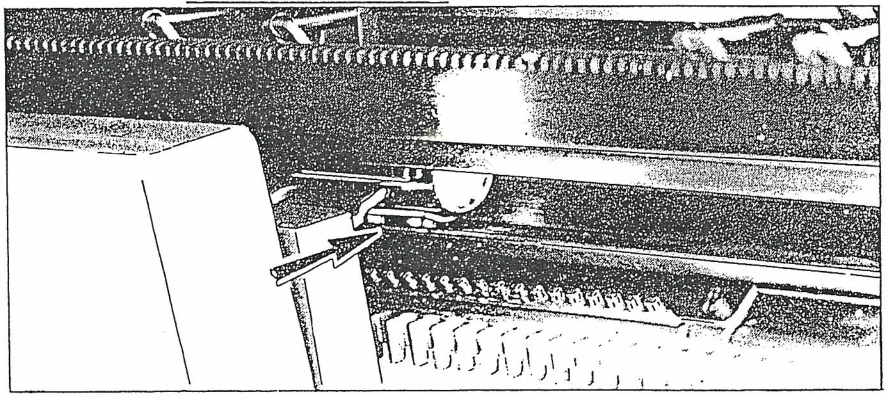
Loosen the screw (V) and reposition the rocker correctly

FFG

yes

FFG

CARRIAGE BALL BEARING CAGES



- Locate the margin stops at their extreme positions
- Remove the paper table

Move the carriage fully to the right and check that the ball bearing cage is not extending beyond the right end of the wayrod

Move the carriage fully to the left, and check that the ball bearing cage is not extending beyond the left end of the wayrod

The ball bearing cages are engaged properly

no

Refer to X20

yes

Each cage contains 6 ball bearings

no

yes

FFG

*

THIS. MANUAL IS. MISSING PAGES. !

— 04/JANUARY/2022. — .